ATHLETIC JOURNAL

Vol. XXIII, No. 1 September, 1942

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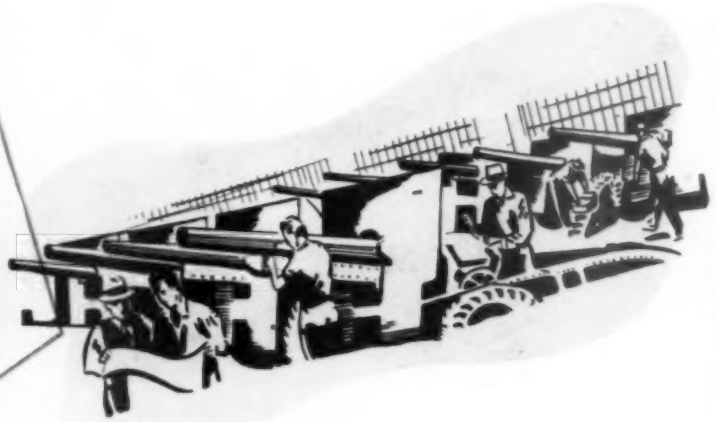

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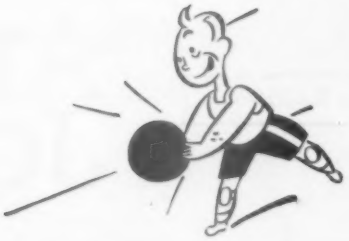

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The ATHLETIC JOURNAL

NUMBER 1

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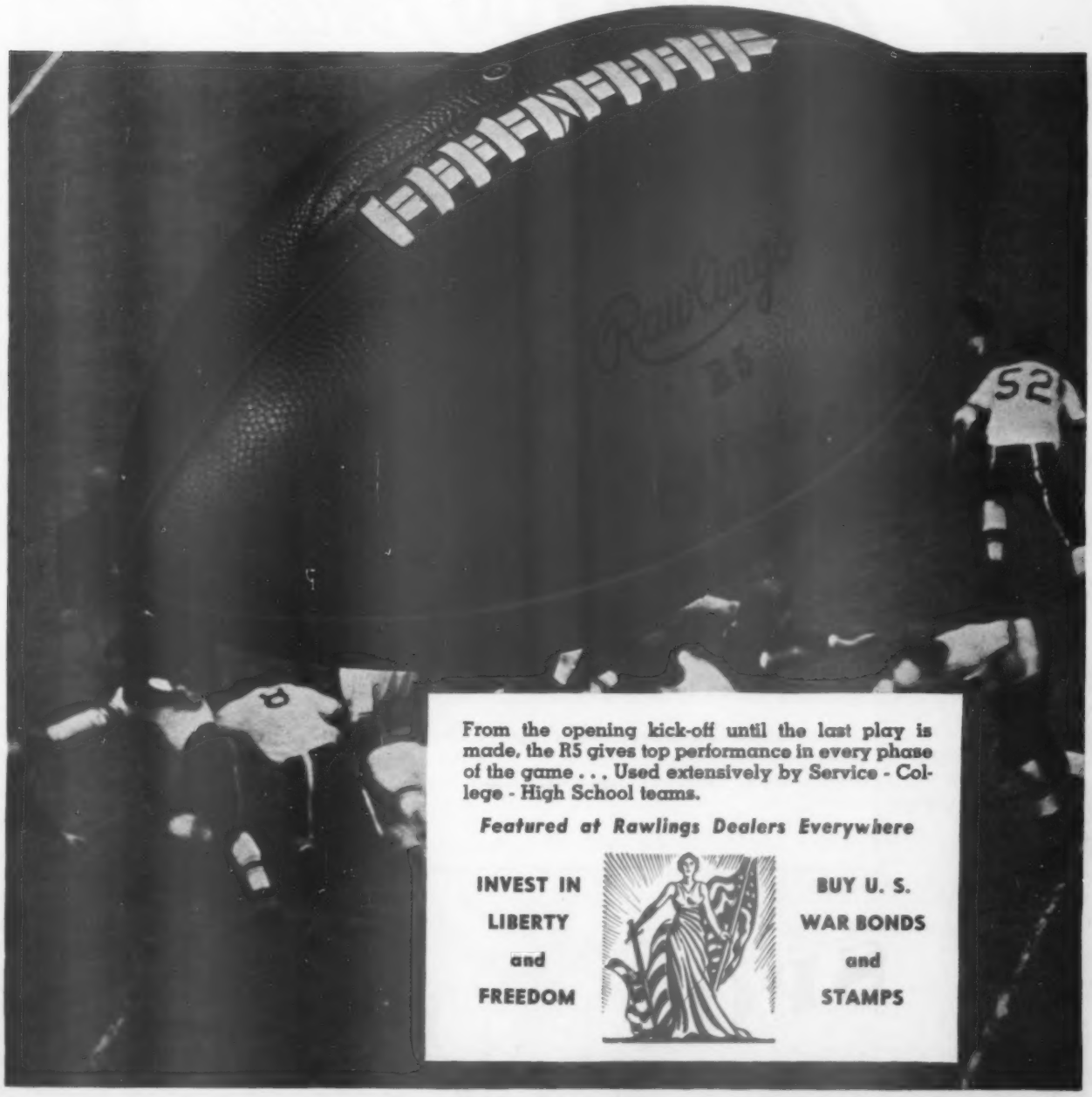

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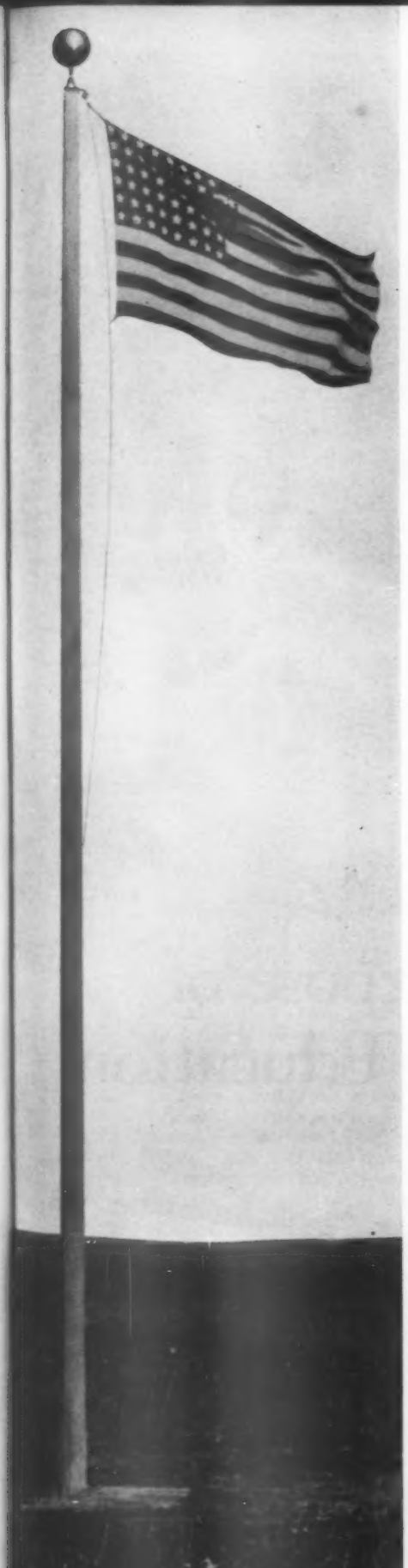

Foreword

Physical Fitness in the Schools and Colleges

By John W. Studebaker
U. S. Commissioner of Education

THIS article by Dr. Studebaker has been named the Foreword of the September issue. It sets forth the plans of the United States Commissioner of Education to make the youth in our schools and colleges physically fit.—Editor's Note.

Military Importance of Physical Fitness

MILITARY and naval authorities agree that a vigorous and rugged type of physical fitness combined with a competitive spirit and a will to win are essentials in the development of the highest type of fighting men for the armed forces. It is true also that there is general agreement concerning the important place that athletics and other types of physical education play in the development of these characteristics. An expanded program of physical fitness, based on an intensive application of physical education activities, in schools and colleges is recognized, therefore, by educators and military leaders as being of great importance in the preparation of young people for service in the armed forces and work in industry and agriculture. In line with the needs reflected by these facts, the United States Office of Education in cooperation with the Army, Navy, and U. S. Public Health Service is engaged in organizing and promoting the development of a program of physical fitness in the schools and colleges of the country.

The most urgent need appears to be on the high school level. Work on the high school physical fitness program, therefore, has been undertaken first. Within the next few weeks representatives of colleges will be invited to confer at the U. S. Office of Education concerning a program of physical fitness in colleges and at a later date attention will be directed to a study of physical education problems in elementary schools.

Development of the High School Program

In the development of the high school program a committee was organized to prepare a manual that could be used by high school administrators and teachers as a guide in their wartime program of physical fitness. The members of this committee included Lt. Col. Theodore P. Bank and Mr. James Pixlee who were appointed by the Secretary of War; Commander Lyman S. Perry, appointed by the Secretary of the Navy; Dr. Franz Schuck and Dr. Mayhew Derryberry who were appointed by the Surgeon General of the U. S. Public Health Service; Dr. Wynn Fredericks, Pennsylvania State Department of Education; Mr. Joe Hall, Florida State Department of Education; Mr. A. H. Pritzlaff, Chicago Public Schools; Mr. Strong Hinman, Topeka Public Schools; Mr. Floyd Rowe, Cleveland Public Schools; Dr. N. P. Nielson, Secretary of the American Association for Health, Physical Education and Recreation; Miss Mazie B. Scanlan, Public Schools, Atlantic City; Miss Ruth Evans, Public Schools, Springfield, Mass.; Miss Martha Hill, New York University; Dr. Ruth E. Grout, Dr. Dorothy LaSalle, Miss Berenice Mallory, and Dr. Jackson R. Sherman of the Office of Education staff; and Mr. Ellwood A. Geiges, Executive Assistant, Division of Physical Fitness, Office of Defense Health and Welfare Services. This committee had the assistance of other civilian and military experts.

The bulletin which outlines the high school physical fitness program has been prepared and is in process of being printed. The purpose and methods that are proposed are directed definitely toward the preparation of high school pupils for service in the Armed Forces and for work in industry, agriculture, business, and essential community services.

There are three general objectives of a physical fitness program. These are concerned with (1) body building and strengthening, (2) recreational activities, and (3) educational experiences that stress group activity and training in social behavior. The emphasis in this program is on the first objective which stresses health habits and physical hardening.

The program that has been prepared recommends that (1) all high school pupils be required to have five full periods each week of instruction in physical education activities; (2) opportunities be provided for all pupils to participate for ten hours each week in interscholastic athletics, intra-mural athletics, mass athletics, road work, hikes, week-end outings, school journeys, and other vigorous physical activities; (3) the physical activity program be planned in light of the results of directed observation of each pupil by the teacher and of medical examinations in places where they can be secured, and (4) the general health education program be improved.

The physical activities included in the program for boys are organized under

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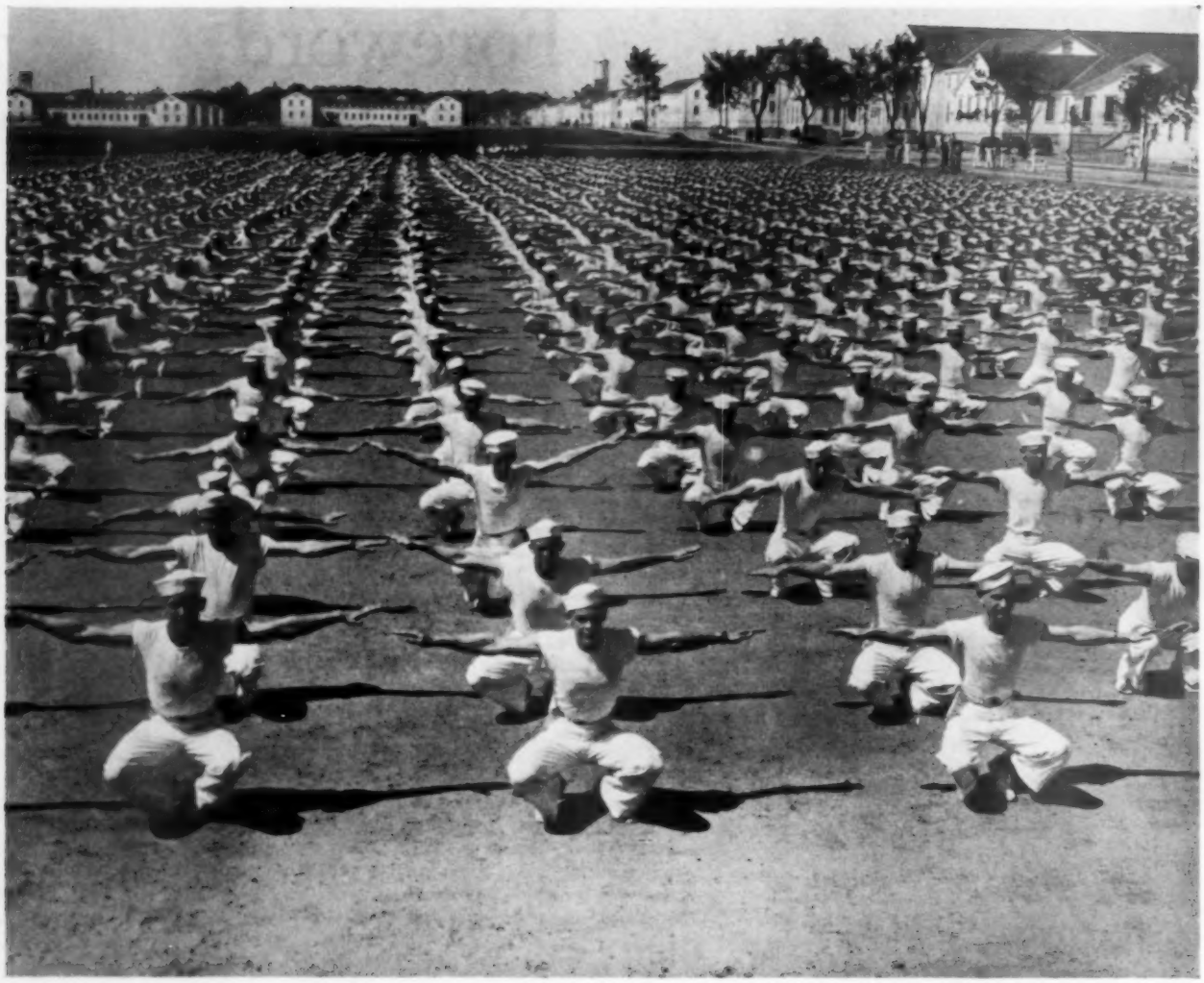


The Three-Fold Purpose of Athletics and Physical Education in the Navy

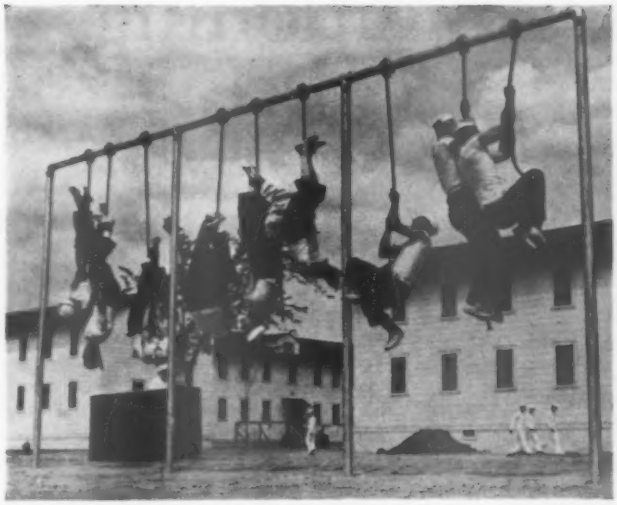
By Lieutenant Commander J. Russell Cook
Athletic Officer, United States Naval Training Station, Great Lakes, Illinois

THE vastness and success of the Navy's physical hardening program are due to the untiring efforts of men whose whole lives have been devoted to athletics. America's strength was revealed to our enemies shortly after the declaration of war as planes, tanks and ships rolled off the assembly lines and runways. It was time for athletic leaders to display their important part in the war effort. A system to develop men rapidly for duty with our mighty fleet had to be devised quickly. It was.

Athletic directors and coaches of Western Conference universities and other schools have seen the gigantic program in operation at the Great Lakes Naval Training Station. Similar systems were introduced at some of the institutions after the visit and since then hardening programs have found their way into many high schools. One of the college directors, gazing upon a huge drill field where mass calisthenics were being held, remarked: "This station is like a big college campus."

It is. There are three athletic programs at the training station. First, there is the required work which every recruit must take along with his military duties. The details of a few of the exercises given these men during their training period will be related later in this article. Then there is the recreational program. Recruits must have these ever-important periods of relaxation. Finally, there is the "varsity" program—this to provide entertainment for men on the station, gain funds and boost enlistments.

All athletes—heralded and unheralded



Up the rope, mates. This picture shows recruits in a rope-climbing event at the Great Lakes Naval Training Station. These events are conducted outdoors during warm weather and in huge drill halls in winter.

Sailors get rid of excess poundage around the waistline with these exercises. Two Chief Petty Officers are conducting this class in one phase of the physical hardening program at the Great Lakes Naval Training Station.

—are given opportunities to win a place on the squad which represents the station. The need of this phase of the athletic program recently was stressed by Captain T. DeWitt Carr, Executive Officer at the Great Lakes Naval Training Station, who said: "Athletic teams representing Great Lakes in contests throughout the Ninth Naval District have three objectives—to entertain and aid in the morale of the thousands of recruits on the station; to boost Navy enlistments and to raise funds for the Navy Relief Society. The basketball team which represented Great Lakes during the 1941-42 season succeeded in fulfilling these objectives far beyond expectations. A third of the team's thirty-six games were played at the training station against leading quintets including Northwestern and Marquette. More than four thousand recruits witnessed each of the games.

"The baseball team has had similar success. It has played major league clubs including the Chicago Cubs and White Sox, New York Giants, St. Louis Browns and Cardinals, Cleveland Indians, Detroit Tigers and Philadelphia Athletics and Phillies. American Association teams also have visited the station. More than eight thousand recruits witness each home game and, for many of them, it was their first opportunity to see a major league team in action. No admission is ever charged at Great Lakes.

"These recruits work hard every day and must have relaxation at the end of the day. Athletic contests go a long way in providing their relaxation. These teams give the recruits something in which they can take pride. They call it "our" team. It means much to their morale. We hope to equal the success of the basketball and baseball teams with similar activities in football this fall," Captain Carr continued.

The men from the industrial plants of Ohio, the youngsters from rural Illinois, Indiana and Wisconsin, workers from the booming factories of Michigan, potential Bluejackets from the hills of Kentucky, other southern states, the east and the far west are given opportunities to engage in all recreational activities. There are basketball and volleyball courts, running tracks, swimming pools, boats for racing, handball courts and softball fields.

In the winter time drill halls have a double purpose. They also serve as vast playing areas. There are three basketball courts and six volleyball courts in each hall. There also are nine 17-foot climbing ropes, two 7-foot wall scales, eighteen tumbling mats and six 30-foot diameter circles for games. Additional zone markings for relays, hop, step and jump and standing broad jump are painted on the floor in each of the huge plants.

The athletic activities of all men are under the direction of three widely known leaders. Lieutenant Paul D. (Tony) Hinkle, formerly of Butler University, supervises basketball and football. Lieutenant Gordon S. (Mickey) Cochrane, once the manager of the Detroit Tigers, conducts the softball and baseball programs. Lieutenant (j.g.) Walter Colbath, who held the national diving championship while attending Northwestern University, directs the swimming events. The three have numerous assistants spread throughout eleven camps on the station and in the service schools.

Nothing too much can be stressed in developing outstanding swimmers at na-

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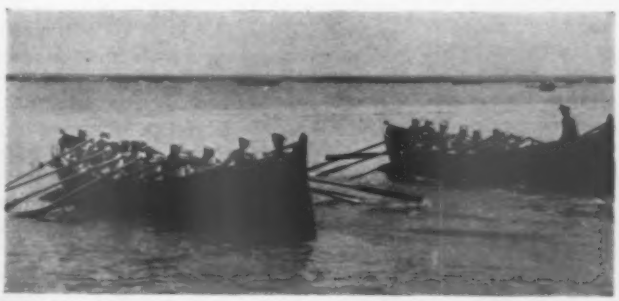


Sailors go for a ride—in a whale boat. The above picture shows recruits engaging in a race on Lake Michigan. During the training period at the Great Lakes Naval Training Station the potential sailors get their lessons in fundamental seamanship. Winners in the boat event get a big prize—extra liberty.

"Strike One." The game of softball has not departed from the lives of sailors at the Great Lakes Naval Training Station. The men spend much of their recreational periods playing the game.

Army Physical Conditioning

By Theodore P. Bank, Lieutenant Colonel, Infantry
Special Service Division, Services of Supply, War Department

The Nature of Fitness

PHYSICAL fitness is only a part of total fitness. For men in the ground forces, total fitness involves: 1. Physical Fitness, a body that can continue to function effectively under the physical stresses placed upon it by the routine and emergency tasks of war. 2. Mental and Emotional Fitness which comprise at least three factors: (a) Habits of thinking and feeling that will permit alertness without waste of energy and rapid relaxation when opportunity affords. (b) Freedom from distracting and energy-sapping associations of strong emotions with situations of daily life. (c) A sense of mission or identification with a cause of great significance shared with others. 3. Professional or Technical Fitness, skill in the art and sciences of a soldier's branch of the services.

The program of physical conditioning is charged primarily with the development and maintenance of *physical fitness*. With other training forces it shares the responsibility of developing and maintaining mental and emotional fitness.

Physical Fitness consists of:

1. *Freedom from disease*. The discovery and care of a disease is a function of the physical examination and the surgeon.

2. Enough *strength* to do easily the heaviest tasks that may be encountered in the routine and emergency day. Strength is developed in muscles primarily when their power of contracting is *challenged by maximum loads*. The following activities primarily develop strength; hard calisthenics and gymnastics, weight lifting, wrestling, sprint running and other activities moving body weight at high speed.

3. Enough "*muscular endurance*" to persist without undue fatigue through the most strenuous day. A strong muscle carries a load for a longer time without tiring than does a weaker one. This kind of endurance is best called local or muscle endurance. It operates whenever the muscle is considerably stronger than the load demanded of it. Consequently, parts of the muscle contract while simultaneously other parts are resting. The exercises for the development are the same as indicated under strength.

4. Enough *cardio-respiratory endurance* to perform easily the most long continued exertion the soldier is likely to face. It is primarily based on training of the heart, lungs and circulation. Prolonged exertion as in distance running, obstacle running, swimming and competitive games extend a man's endurance, provided he forces himself often to exercise *far past his usual limit*.

5. Enough *speed, agility and flexibility* to handle himself effectively in tactical operations. These factors are best developed in properly selected calisthenics exercises and in other activities involving quick, strong movements.

Strength, endurance, agility, speed and flexibility are enlarged with practice. When practice is stopped these gains are again lost. Therefore, there must be regular and continuous attention to the development of muscles, heart and lungs. Strength, endurance, agility, speed and flexibility can be measured in a testing program. The results from such a test will serve to point out the present fitness status of the soldier. Retests should be given at three-month intervals to discover whether physical fitness is maintained.

Basic Conditioning Program

This section presents six programs of exercise that are generally considered to be of basic importance in developing and conditioning the body. They also constitute an excellent means for maintaining the body at a high level of condition and development.

The types of programs presented are:

1. Calisthenics.
   (a) Standing Drill
   (b) Ground Drill
2. Guerrilla Exercises
3. Grass Drills
4. Running
   (a) Road of Drill Field
   (b) Cross Country
   (c) Steeple Chase and Obstacle Course
5. Relay races
6. Combative contests

The first three types of programs when properly conducted contribute to the development and maintenances of a wide variety of physical qualities—strength, agility, flexibility, balance, muscular endurance, and cardio-respiratory endurance. The others, while contributing somewhat to the development and maintenance of all of these same qualities, make their greatest contributions to the development and maintenance of muscular and cardio-respiratory endurance qualities that are highly important in modern warfare.

In general, it would be advisable to have the troops participate in at least one of these activities daily. The type used should be determined by the local instructor in terms of the needs of the men, weather conditions, etc. Two of the activities might be combined in one session.

The Day's Program

Since the time is short, not every type of activity can be use every day, hence choices will have to be made. In each case, the activity should be continued until there is marked local muscular fatigue, or respiratory distress. Considerable time should be given to the combative activities, for they are excellent exercise, and at the same time give training in skills that carry over to hand-to-hand fighting later. Combinations of these activities might be somewhat as follows:

Monday: Calisthenics, 15 minutes; combative activities, 10 minutes; running 5 minutes.

Tuesday: Running, 5 minutes; grass drills 10 minutes; guerrilla exercises, 5 minutes; relays, 10 minutes.

Wednesday: Calisthenics, 15 minutes; grass drills, 10 minutes; alternate slow jogs and fast, short sprints, terminating with a little walking, 5 minutes.

Thursday: Jogging, with a little sprinting about once a minute (sprints about 50 yards), 5 minutes; guerrilla exercises, 10 minutes; combative activities, 15 minutes.

Friday: Calisthenics, 15 minutes; relays, 10 minutes; grass drills 5 minutes.

Saturday: Road work—running, alternating some walking. Occasionally put in a short sprint. Go over a steeple chase if possible, 30 minutes.

Whenever possible, detail some men to chinning, sending them over a squad at a time.

Whenever possible to get the use of the obstacle course, double time out to the course, run it twice, then double two-thirds of the way back, walking the last third to cool off. This may be substituted at any time for a day's activities. Do it occasionally with full pack.

One combination calisthenic drill is presented: A standing drill and a ground drill. The first is to be used when ground conditions prohibit sitting or lying on the ground. The second is to be used when the men can sit or lie on the ground. The drills are designed to give the performer an all-round workout,—giving particular emphasis to the larger muscle masses of the trunk (the so-called middle third). The exercises included in both drills have been deliberately selected or formulated to the end of eliminating or reducing to a minimum, slackness in performance.

Attention is called to the fact that these drills are "set." It is proposed that they be used over, and over, and over again. This proposal is based on the assumption that a good exercise always remains a good

exercise whether it is being performed for the first time or for the thousandth time. This policy also eliminates the great waste of time always associated with learning new exercises.

The instructor should require the men to learn the drills by heart. There are three advantages in this. (1) It facilitates the conduct of the program. (2) It is more pleasing and more beneficial to the men. These exercises are performed in open-order formation. (3) The men know a good set of exercises they can perform on their own.

All of the exercises should be performed rhythmically. Rhythmic movements are not only more pleasing to the performer, but are also more natural.

The terminal point in many of the movements of the exercises are described as "bounces" or "bounce-like." This is descriptive of the type of movement performed. The part involved (trunk, legs, etc.) "bounces" or "springs" into and out of the indicated position. The reader can get the idea by assuming a squat position and bouncing up and down (keeping the feet on the floor) or leaning forward with knees still reaching hands toward the floor and bounding the trunk up and down. The count is given at the extreme point of the "bounce." Successive bounces are normally performed at the rate of approximately ten in seven seconds.

During the first few meetings, an instructor in teaching calisthenics should stand in front of the class and, in addition to directing the work, should perform the exercises with the men. After the exercises have been partially learned, however, this practice should be abandoned. The work can be carried on much more effectively by placing one of the better performers in front of the class, facing the class. This individual sets an example for the class. The instructor is thus free to move about as he pleases, give commands, make suggestions and otherwise direct the class in a most efficient manner.

In the beginning, each exercise should be repeated only a limited number of times. Likewise, in the beginning, a short pause might be given after each exercise or after every two exercises. (This should be brief, not over 10 seconds).

After a few (3 or 4) performances, the number of repetitions should be gradually increased and the pauses gradually reduced both in number and in length. After ten or twelve performances each exercise should be repeated the maximum number of times and the entire drill performed continuously with no pauses. One of the purposes of these drills is to give the performers a workout; the instructor should see to it that this end is attained. "Don't spare the horses."

Calisthenic Drill

Note:—This drill is convertible from a standing drill, in which all exercises will be done with the men on their feet, to a drill in which some exercises are done while the men are sitting or lying on the ground, or a "ground drill." In so converting the drill, *add* exercise 3a., and *substitute* exercise 6a. for exercise 6, and 7a. for exercise 7.

The abbreviation "Pos." means the starting position of the exercise. "Mov." means the movement.

1. *Pos:* Feet separated about a foot, knees slightly bent, arms raised backwards. *Mov:* Swing the arms as in the standing high jump, with a "crow hop" at the end of each forward and each backward swing. On each second forward swing, jump upward at least a foot from the ground. Swing arms hard and jump with vigor. 12 to 25 times.

2. *Pos:* Attention. *Mov:* (1) Bend slightly at the knees and sharply at the hips, and place hands on floor in front of feet. (2) Thrust feet and legs to a front leaning rest position, with body straight from shoulders to feet. (3) Return to the squat rest position. (4) Resume standing position. 30 to 50 times.

3. *Pos:* Feet slightly separated and elbows bent, with fists at either side of shoulders—Thrust position. *Mov:* (1) Full squat, thrust arms forward. Keep trunk erect. (2) Return to original position. (3) Bend forward sharply, thrusting downward with the hands, touching toes if possible, with knees straight. (4) Return to position. 20 to 30 times.

3a. *Pos:* Lie on back, arms extended over head. *Mov:* Sit up, and at the same time, bend knees sharply. Lean forward, thrusting or swinging arms forward to a rowing position with knees against chest, and arms forward. Return. 20 to 40 times.

4. *Pos:* Front leaning rest (as in position (2) of exercise 2). *Mov:* Bend elbows and touch chest to ground, keeping body straight. 16 to 40 times. *(Note:*—There will be a number who will not be able to do this exercise as many times as desired and keep the rhythm. Order them, when they cannot keep up with the rhythm, to change to a knee-leaning-rest position, namely, with hands and *knees* on ground (knees bent slightly to get feet off the ground), and continue. The movement is easier this way. If they cannot continue in this manner, relax the whole trunk, and simply push up the shoulders with the arms. But *do not quit trying).*

5. *Pos:* Attention. *Mov:* (1) Spring upward slightly with a small accompanying arm swing. Land with knees bent. (2) Again spring upward, but higher, and swing legs forward, trying to kick hands with the toes. Arms are extended forward and downward, and the trunk is bent forward sharply. Keep knees as straight as possible. Alternate these two jumps in slow rhythm. 10 to 20 times.

6. *Pos:* Feet apart sidewards about two feet, arms in thrust position. *Mov:* Thrust arms forward and touch toes, knees straight. (6a) Lie back in original position, and raise legs, swinging them over head and touching toes to ground above head. 20 to 40 times.

7. *Pos:* Feet apart about two and a half feet, arms overhead, hands clasped, palm to palm. *Mov:* (1) Bend sidewards left, bending left knee. (2 & 3) Bounce sidewards left twice, hitting it hard, and going deeper each time. (4) Return to position. Same other side. 20 to 30 times.

7a. *Pos:* On back, arms extended sidewards, palms downward, legs vertical and together, knees straight. *Mov:* Swing legs vigorously to left and then to right, touching the ground on each side. Do this slowly at first, then increase the tempo to as fast as the group can do it together and not be thrown out of position by the momentum of the legs. 20 to 30 times.

8. *Pos:* Left foot forward about eight inches, hands clasped on top of head. *Mov:* (1) Bend knees to full squat *on rear heel;* bounce from this squat. (2) *Spring* upwards until knees are straight, and both feet have left the ground; change position of feet, the rear foot becoming the forward foot and vice versa; (3) Drop to squat on rear heel again, and (4) Continue the movement with alternation of the feet. Begin with 15 and add 5 a week until men can do 50. (One jump is one movement).

9. *Pos:* Feet apart sidewards about two feet, hands clasped behind head, elbows held backwards hard, chin held in. *Mov:* (1) Bend forward, knees straight. Do this vigorously. (2) Bounce downward, but simultaneously rotate trunk sharply to the left. (3) Same, to right. (4) Return to original position, pulling head back and chin in strongly. 20 to 40 times.

10. *Pos:* Arms in running position, standing erect. *Mov:* Stationary run. Begin slowly and run about 20 double steps (counting only on left foot's step). Speed up somewhat for another 20 steps, raising knees to height of hips. Then run 20 to 40 steps at full speed, raising knees hard; then slow for 20 steps more.

11. *Pos:* Attention. *Mov:* (1) Full squat, placing hands on floor in front of feet, shoulder-width apart. (2) Thrust feet and legs back to front leaning rest position. (3, 4, 5, & 6) Two floor dips. (7) Return to squat rest. (8) Position. 10 to 20 times.

12. Stationary walk, raising knees well and swinging arms. 20 to 40 steps. Breathe deeply and rhythmically with the steps, two steps to an inhalation and two to an exhalation.

Guerrilla Exercises

Guerrilla exercises are distinctive in that they not only contribute materially to con-

(Continued on page 26)

Athletics a Part of the Physical Training Program at the Naval Aviation Pre-Flight Schools

By William R. Reed, Ensign, U. S. N. R.
Public Relations Office, Naval Aviation Pre-Flight School, Iowa City, Iowa

FEW programs in the war effort have captured public and professional interest as has the physical training program for naval aviation. That program was first outlined publicly by Lieutenant Commander Tom Hamilton at the conventions of the National Collegiate Athletic Association, the American Football Coaches Association and the College Physical Education Society in Detroit, Michigan, last December. The response of those groups to the outline of purposes given by Commander Hamilton, although spontaneous and enthusiastic, was not to be compared to the overwhelming response of school and college physical education and athletic administrators when the program was formally announced a short time later.

Purpose of the Athletic Training Program

To turn into the air, in one year, pilots who are not only skillful in flying technique and knowledge but stronger and tougher physically and mentally, called for a most intensive and rigorous program of physical and mental training. High school and college athletic programs have developed mental alertness, agility, initiative and a competitive spirit. Those sports which seem to have made the greatest contribution toward the development of the above-mentioned requisites of a fighting air cadet have been selected in the pre-flight schools: Basketball, boxing, hand-to-hand combat, football, military track, gymnastics and tumbling, soccer, swimming and wrestling.

Purposes and Objectives of the Selected Sports

The purposes and objectives of the selected sports as outlined in the Physical Training Program for the Naval Aviation Pre-Flight Schools clearly emphasize to civilian coaches the country over that athletics as organized in the schools and colleges are to play an important part in the hardening of navy fliers. Only the tempo and the purpose are changed. Programs will be speeded up and sport will not be engaged in for sport's sake, but for the very definite contribution of winning the war.

Basketball's place in the Naval Aviation Physical Training Program is important because of its premium on individual competitive skill, aggressiveness, physical stamina and in the individual's ability to fit himself into team play. The game is particularly valuable in the development of optical, muscular and mental co-ordination.

Objectives: 1 To improve co-ordination of the eye, mind and body. 2. To develop in the cadet the ability to make instantaneous and accurate decisions. 3. To develop agility and endurance.

Boxing, a sport as old as the art of war itself, provides in its elements of individual combat a close parallel to the battle conditions that a pilot must face. The feint, the dodge, the counter thrust and the sudden devastating finishing blow are as much a part of air fighting as they are of boxing.

Objectives: 1. Instruction and practice in boxing fundamentals. 2. To give the cadet the self-assurance necessary to successful self-defense. 3. To develop an aggressive combative spirit, self-reliance, stamina and courage.

The program of hand-to-hand combat includes the most effective maneuvers of wrestling, boxing and football, which may be used in self-defense against an opponent who may or may not be armed. The success of these methods depends upon physical courage, superior physical condition and superior skill. Emphasis is placed upon a vigorous and violent counter attack, rather than upon the refinements of boxing or wrestling.

Objectives: 1. To teach the skills of ordinary combat against an unarmed opponent. 2. To teach the most effective methods of self-defense against an assailant armed with a gun, knife, black-jack, or riot stick. 3. To teach the best methods of overcoming an opponent who has gained a temporary advantage over one. 4. To liquidate an opponent.

Football, as far as the exact techniques involved in the game are concerned, will have very little direct application in actual Naval Aviation combat, but there are certain qualities desirable in an aviator which can be developed through the medium of football.

Objectives: 1. Aggressiveness (physical and mental). 2. Physical fitness. 3. Co-ordination. 4. Alertness. 5. Discipline. 6. Teamwork. 7. Toughness. 8. Quick reactions.

Military track is of value to the general physical program because it involves a definite criteria of performance, that is, the stop watch and tape measure. Progress or retardation may be determined accurately. It must be remembered that the development of track champions is not the ultimate aim but, rather, military track is a medium for preparing our pilots physically and mentally to defeat our enemies. Thus a number of events have been included which are not standard track or field events.

Objectives: 1. To develop conditioned fighting pilots by emphasizing training in speed, agility, endurance, co-ordination, strength and timing. 2. To instruct cadets in skills that have a definite carry-over into military tactics.

Tumbling and Gymnastics provide one of the closest correlations between training experience and actual flying demands through emphasis on daring and courage, strength and skill for extrication from emergency situations, native sense of balance, and extended periods upside down.

Objectives: 1. To give training to the native sense of balance. 2. To equip the future pilot with strength and skill to extricate himself from emergency situations requiring climbing, vaulting, tumbling and balance. 3. To develop daring and courage. 4. To accustom the cadet to being upside down for extended periods. 5. To teach landing and falling without injury.

The game of soccer has a unique place in the physical fitness program. It is the one sport in which the cadet must control his own weight and the ball at the same time. This feature stresses the development of agility, co-ordination and balance.

Objectives: 1. To develop thorough team play, agility, speed, ruggedness, endurance, quick thinking, anticipation, timing and a will to win. 2. Through bodily contact to develop ruggedness and endurance. 3. To develop the use of the feet. 4. To condition men through the extensive running this sport requires.

Naval Aviation training requires that the aims of swimming instruction be changed from specialization and speed to that of teaching men to stay up for un-

(Continued on page 40)

An Obstacle Pentathlon

By Herbert W. Read

Coach of Basketball and Instructor in Physical Education, Western Michigan College

IN the last analysis it is the necessities of government that determine the type of physical education that should be given to its men. War seems to be a final arbiter in the matter. Then, the genial activities of play lose caste, both as a medium for securing health and developing character, and what is wanted is compulsion to exert the full forces of the body to the end that rugged strength may be had, with stamina and the kind of character that can stand the stresses of exhausting physical effort and the hazards of all-out struggle. It is in this light that the obstacle run or race has been born.

A number of these involving a great variety of physical devices or stunts have been given publicity. Many are sound in that they check the physical structure of the individual and test his stamina. Others are freakish, reminiscent of class games. What many of them lack is a type of structure that can be made available for all school and camp areas and a type of tests that will permit checking of performance and the establishment of norms, so that progress may be measured and the right stimulation secured.

This rules out barrel crawls which would permit an emaciated youth to score high and penalize too much a square shouldered, stocky chap; the dives through suspended tires with their tricky gyrations; the rope swings over bodies of water with more mirth possible to the spectators than development to the participant; the struggle through rivers of varying width and depth and uncertain footing; and other tests which would give too great a variance in results, not consonant with the types of physique and effort involved.

The course herein to be described consists of five obstacles arranged on a seventy-five yard straightaway. All heights are exact and the distances between the obstacles measured down to the inch. The materials for the course were secured from an old building which was being razed on the campus.

Two four-by-four posts are set at the start, sixteen feet apart—the width of the course throughout. Ten yards from the start is a three-foot hurdle, made of two-inch planks, nailed to four-by-four posts. Originally a three-foot-six hurdle was considered, but it resulted in too many spills and was evidently too high for the average youth to take in stride. A steeplechase type with surmounting brush to a height of four six was discovered as being too difficult to construct and maintain.

Ten yards farther is a seven-foot wall. Two inch planks were nailed to three six-by-six beams, set four feet into the ground and beveled away at the top to avoid injury. Action on this wall is quite vigorous and the posts will be reset in concrete this fall.

After the wall there is a run of five yards and then a dive under a platform, built two feet off the ground with inch-thick boards nailed to the lower side of two-by-ten stringers supported on six-by-six posts. This is a five-yard spider crawl. The boards are run lengthwise with the course and a ten-inch board is set across, and just above, the entrance to the obstacle, slanting down and in. This gives a bevel which will prevent head injury as the participant dives down and under. All types of physiques can operate under this platform without undue handicapping and its two-foot height is just enough to prevent a slimly built fellow making a monkey run out of the crawl, getting a jump on the time as well as changing the nature of the obstacle. This platform is sheathed on top of the joists and tar papered to keep rain from ruining the lower sheathing.

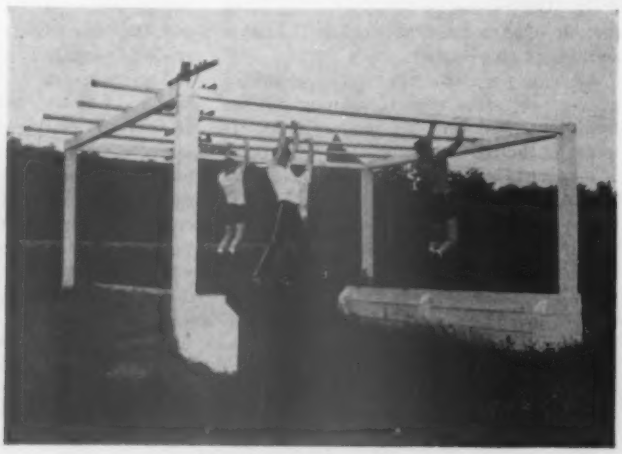
At the end of the crawl there is a five-yard distance to what may be called the monkey swing. This consists of four two-inch pipes set lengthwise of the course and supported ten feet above the ground on a wooden framework, five yards long and sixteen feet wide. All members of the framework, supporting posts and cross-beams are six by six. The pipes are set four feet apart. This allows four men to swing along at a time in the competitive races.

The ten-foot height above the ground was set to permit clearance for even the tallest man and to compel traveling the full length of the pipes. There is a ramp at the start and a ramp at the finish from which to mount and on which to dismount. These ramps are of earth three feet high backed up against a wall of two-inch planks set two feet inside the framework at each end. Black marks, two feet from the starting ends of the pipes (pipes and all other construction are painted white) indicate the points at which the pipes are to be first grasped.

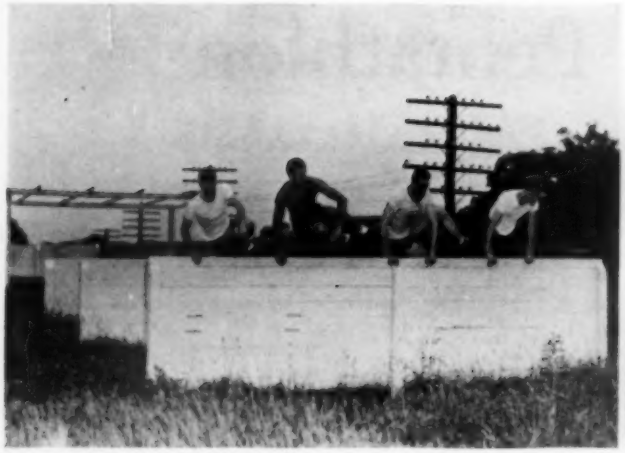
At the end of the monkey swing there is a distance of ten yards to a battery of three fence vaults, four feet, six in height and set five yards apart. Their construction is the same as that of the opening hurdle. From the last vault the contestant gathers himself for a fifteen-yard dash to the finish line marked by two posts. Again it may be emphasized that all obstacles and the course itself are sixteen feet wide, permitting four men to travel abreast, when it is desired to run men in competition.

This describes briefly, but it is hoped, adequately the type of obstacle and the type of construction. As an added item of

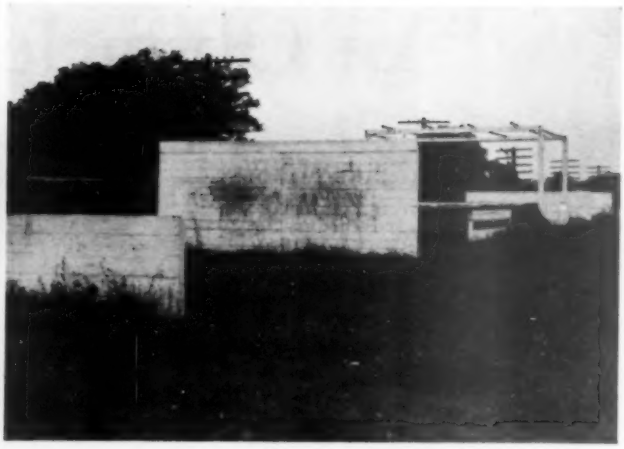
Up the Seven-Foot Wall.



Grasping the Iron Pipes.



Taking the Last Hurdle.



Looking Down the Course.

information it may be said the course is located at Western Michigan College along the edge of a playing field, nearly half a mile from the gymnasium, and on a sodded area. Thus it can be used on any but very wet days. Other conditions of its use will be given exposition further along in this article.

Now, let us see if we have something that we want done, if we have constructed a device that will bring about somewhat neglected physical development, stamina, and agility, with a touch of rugged competitive urge.

We shall not claim too much for the first obstacle—the hurdle—since leg development seems not lacking through our program of games where running is a main feature. Yet, taking this board fence in a fast stride undoubtedly produces heightened power in the gastrocnemius and other leg muscles. The seven-foot wall, however, is something different. Here an arm-flexion pull is primarly involved with the neglected muscles of the whole shoulder girdle area showing weakness; biceps, trapezius, deltoids and latissimus dorsi complaining in often futile effort, particularly if there is a flabby abdominal wall and overweight in the lower reaches of the body. Only seven feet and yet a fair cross section of American youth lose valuable seconds at this barrier.

All can negotiate the spider crawl of course; yet since time is running on, the need for speed puts on the pressure. It looks as though every muscle of the body is involved, but undoubtedly the legs are putting on the most drive with the sartorius and the quadratus largely in the picture.

Then comes the run up the ramp and the grasping of the iron pipes for that hand walk which we have designated the monkey swing. Here there is a definite testing again of shoulder girdle strength with the wrist and fingers having to do plenty of work. If we wish again to get technical we can vision the brachioradiali and the brachialis doing a bit of groaning with the rectus abdominis in somewhat acute agony. To make it simple, much of the body is involved that has been neglected in our modern programs of physical education.

Ten yards of run now and we come to the battery of three hurdles. Why a battery of three? Well, we want a bit of stamina testing and three four-foot-six vaults do it nicely. It is no particular trick to get over the first, but by the time the second is reached, the toll of the body strength taken in the first four obstacles begins to show and there is often a faltering and stumbling and a call on reserves of power before the final vault is achieved. Both legs and arms are involved, but the shoulder area largely. Specifically, the biceps and the trapezious do the important part of the work.

The fifteen-yard sprint that is left to the finish line involves nothing much technically, except that it does challenge the will and reserves of strength to get under full steam to cut down those important fractions of seconds piling up.

The scoring is the important part of the whole proceeding for here is the real measuring and the real stimulation to effort and development. The starting is done with a whistle accompanied by a drop of the arm and the time checked with a stop watch, graded to tenths of a second.

The program for a semester is established as follows: each man is timed singly at the start of the semester, again at mid-semester, and then at the close of the semester. Every physical education period during the semester, he is run over the course at least twice—at the start of the period and at the close. Time is not taken officially then; that is for the records, but it may be for the runner's own satisfaction and encouragement. In fact this procedure would involve too much of the time of the teacher who has a main activity program to carry on. The best method for practice and development is to arrange races, four men with similar time records competing at a time. The sixteen-foot width of the course permits this.

Now, for a few phenomena and facts, or as our guidance friends will have it, the anecdotal evidence.

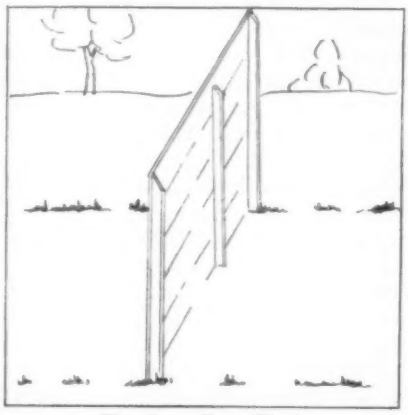
In a first trial of the course with a major class in physical education the best time made was by Gensichen, basketball star, a man who evidenced quite a bit of gymnastic ability indoors, who did the course in 24 seconds. Metzger, football end and second baseman in baseball, did the course in 24.5, and Veenkamp, track sprinter and broad jumper, as well as a man of some abilities in football and basketball, achieved 24.7. There was no preliminary practice for any of the three. They went at the course "cold." It had been completed the day previous.

All three men had good balance in shoulder girdle and pelvic girdle development, were in good physical condition, and of course interested in making a good showing. They had the strong competitive instinct, strengthened by their athletic careers which could easily be translated into a strong combative one. Both Metzger and Veenkamp lost control of themselves a bit at the second vault, whereas Gensichen went over the three cleanly in rather good gymnastic form, and that appeared to be the margin of his superior time.

The slow times in this particular class were made by Jones and Smith which are not their names but will suffice as it would not be good form to discuss here their weaknesses. One did the course in 35.7 and the other in 36.5. They had a tough time at the wall and as tough a time at the monkey swing. Both were weak in the shoulders and heavy in the hips. Kay, a well proportioned chap with good shoulders though not an athlete did the course in 27.4 which was a satisfactory correlation.

The valuable information in connection with this obstacle course should come, not from any selected group but from the average student—the one who takes physical education for what is known as credit. In

The Three-Foot Hurdle.



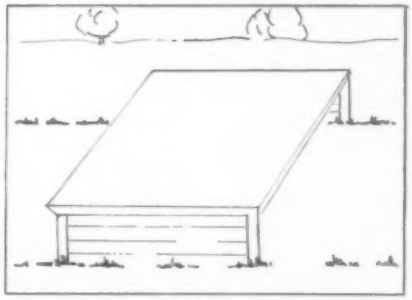
The Seven-Foot Wall.

these days of a push-button civilization he may pretty well type, in physique and performance, the average American youth.

The scored effort of such a class, taken on a first test and again after a period of practice, shows the improvement made. Accompanying each score is a brief comment on the physical structure and condition of the individual, made at my suggestion by the student teacher handling the class. He was a capable chap with an earnest attitude towards his task and his comments, if sketchy and incomplete, still have the merit of honest observation. For obvious reasons I have changed the names of the members of the class, but otherwise all data is exactly as registered.

The second test was after a lapse of three weeks with intervening practice.

In general, it may be claimed for this course that it offers a quick, comparatively cheap, and practical way of measuring the strength, agility, and stamina of men and includes the practice that will enable them to improve these qualities. It has the advantage over so many test and measurement programs and devices in that it is not static but is kinetic and operates with so much greater speed. It has follow-up possibilities which so many have lacked. Men do not just take a test and forget about it:



The Spider Crawl.

OBSTACLE PENTATHLON RESULTS

Name	*1st Test*	*2nd Test*	*Physical Characteristics*
Wait	38.5	35	Tall, awkward, not developed
Kline	44.2	31.9	Small stature, lacks co-ordination
Jones	40.8	39	Lacks agility, awkward, small
Stimson	23.2	22.6	Good shoulders, very muscular
Alden	30	27.6	No development, average build
Abbott	29.3	27.2	Small, agile, muscles not developed
Hatch	29	26.4	Good build, fair co-ordination
Lord	26.8	25.2	Muscles good, good co-ordination
High	26.2	25.7	Tall; not too muscular
Brown	32.7	28.6	Good muscles (one leg defective)
Betts	38.6	30	Rather puggy; muscles not developed
Peck	29	26.8	Well built; muscles look flabby
Chase	32.6	27.9	Very short, stout, a slight ptsosis
Lane	30.6	27.3	Underdeveloped
Wills	27.8	24.3	Good shoulders; quite agile
Olsen	35.7	28.1	Small; good co-ordination
Pingree	38.6	36	Lacks development
Kutz	39.3	31	Muscles flabby
Stillman	34.2	33.7	Both development and co-ordination not good
Bent	30	28.3	Thin, muscular, but lacks co-ordination
Slade	41.2	42	Looks soft, badly developed
Arden	30.8	29.1	Awkward, not co-ordinated
Nebb	29.6	30	Slow, lacks agility
Krum	31.6	28.7	Seems undeveloped
Average	32.9	30.1	Gain of 2.8

the record is in front of their eyes; and the apparatus is there on which they can work and on which they can develop. Perhaps, it is the war which gives much of the impetus, but a sound conception of education for complete citizenship should make them always strive to be fit to bear the full burden that citizenship implies.

Danger of injury in running this course was given some thought. So much has safety education come into the physical education picture in recent years that exposing boys to any hazards has become a problem for the teacher. There is a ridiculous angle to that situation of course. You cannot get a "tough" citizenship out of "soft" education. There is, also, the inconsistency of parents and school administrators becoming hysterical, if a boy suffers a broken arm in the gymnasium while at the same time uttering hardly a protest when the boy takes the family car and receives a far worse injury on the highway—an immeasurably greater hazard. Now public opinion most probably is due to change. War with its terrific hazards belittles safety, too dearly held. And afar from the battle line and sea perils, army training camps are putting the boys through. One camp in Georgia has a record of two broken legs a week on its obstacle course.

Perhaps this course at Western Michigan College involves just permissible risks. Construction on it was finished early in May and with some hundreds of boys going over it daily for about a month there was only a sprained ankle and that came to a boy coming off the seven-foot wall.

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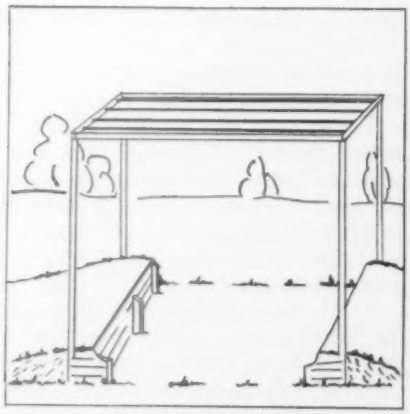
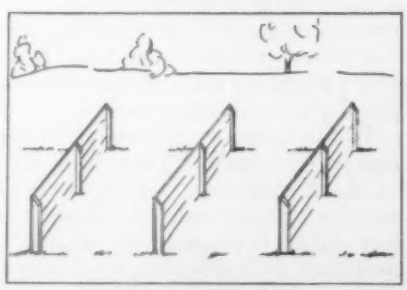


The Monkey Swing.



The Three Fence Vaults.

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JOHN L. GRIFFITH, Editor

Co-ordinating Army and Navy Conditioning Programs with Programs in the Schools and Colleges

THE ATHLETIC JOURNAL was founded some twenty years ago for the purpose of advocating that more attention be given to the physical training of our boys in the schools and colleges than had been the case prior to World War One.

Our thought was that the pacifists and others who believed that the best defense was no defense would temporarily at least have their way and, consequently, while they were doing everything they could to make America weak, the athletic men of the nation might be able to counteract their efforts by making America strong, by and through athletics and physical training.

Today, we are in the biggest war that this war-weary world has ever known and the governments of all of the nations engaged in this war are calling for men who are tough physically, who have great endurance, possessed of speed and agility and, above all, who have the combative spirit to fight this war and win.

From time to time we have published reports of the hardening courses that have been developed in the different schools and colleges. The fact that groups and organizations are preparing conditioning courses is encouraging. The office of education is preparing a program; the Army has prepared a program; the Social Security Agency has prepared suggested programs and the Navy has made available programs such as have been used in the Navy's pre-flight training schools.

In this issue we present descriptions of programs now in use by the Army and Navy. It is not wise to think that men can be conditioned for military service by any one plan alone. The fact is that a boy after three months of football is just about as tough as the commandos who are called upon to do incredible things. The boys who play basketball for four months, as a general rule are in the pink of condition along about March first. A study of the programs recommended by the Army and Navy may be followed with profit to all concerned.

The Need of a Nation-Wide Physical Fitness Program

THE story of physical training in this country has quite abruptly entered a new phase because of the conditions attendant upon our war effort. Perhaps more than any other war, the present conflict is bringing to bear a growing general attention to the physical condition of the American soldier, sailor, and marine. Concurrently, there is an intense interest in the procedures and programs which are being set up to prepare our fighting men for the rigours of combat.

This war is different. The least expert can attest to that. It is a war of movement; a war of continuing and relentless offensive. In the last great war, soldiers were entrenched for long periods and, in a sense, those intervals could be called static in comparison with the endless flow and plasticity in the present war.

There are many aspects of this situation relating to the men, machines, and materials involved. Specifically, the technological developments in military science have placed an immeasurably increased strain upon the men involved. They may be called upon to move further in one day under greater loads than a soldier during the past war might have been ordered to move in more than a week.

This war, then, emphasizes the need for physical fitness. It demands a special condition, mental and physical, to shoulder the burden of the commando-type raid with its component elements of surprise, speed, and intense close-range fighting.

The ideal type soldier under these factors would be hard to characterize briefly. The simplest analysis, however, would show him to possess those qualities which are so clearly indentified with school and college athletics. He would, in part, be in excellent physical condition, strong, aggressive, alert, intelligent, quickly adaptable to constantly changing situations, and he would know the essential fundaments of team work.

Further, his morale would be good. Men in poor physical condition cannot have the morale necessary to a winning fight. The well-trained athlete should have that special poise peculiar to his kind which would find him reacting quickly and fearlessly to any condition of competition. In the same way the fighting man whose stamina and reactions are at peak as the result of training will best his rival in combat because of those qualities.

It would be fair to ask if it is not possible to develop those qualities in ways other than through competitive athletics. The answer would be yes. But this is the key to the whole situation; the prohibitive element of time forces us to eliminate any program which would be too long drawn-out. Our men must be prepared—and quickly.

Speed is the great factor.

We must combine the several best aspects of the different programs. The unique qualities of competitive athletics would probably contribute to the physical fitness program with great effectiveness when modified to fit the situation. The competitive program when combined with a calesthenics routine would hurry the task of hardening the man who will eventually be in combat.

Unofficially, reports have shown the war effort to be retarded by a lack of physical fitness among many draftees. It takes time to build these men into physical fighting units. There are still in the American colleges, universities, and high schools several million boys who will be called upon to fight. The time to prepare these boys physically is not after they are in the service, but *now*.

It cannot be too strongly urged that our educational institutions take immediate steps to get their young men in top physical condition. Pre-service conditioning is necessary. In past days there was much serious discussion of the merits of compulsion and election in our college physical training programs. We must beg the academic question in the face of war and immediately set about to modify our programs to the great need of this moment. An intense course of action is directed by the impact of conflict throughout the world.

Calisthenics versus Competitive Games

UNFORTUNATELY, there is once again before the public a dispute as to the relative values of the various divisions of physical training. It is the result, perhaps, of the type of thought which would condemn without trial and which would eliminate a given situation rather than adapt the best factors of both to a newly arisen need.

It would be well for a moment to review briefly some of the story of the development of the two main divisions of physical training as it is presently constituted in this country. First, there are the group calisthenic programs, as derived from the old German and Swedish systems. The original American college physical training routines were set up upon these systems.

In substance, these procedures all precluded competitive athletics in the physical training picture. The individual of unique athletic capabilities had no outlet. There gradually developed an antipathy in America to these ideas which had been brought to this country after the Franco-Prussian wars.

The second major division in physical training is that which admits competitive athletics and integrates a part of the calisthenics idea into its program. It is the program which has been generally adopted in our colleges, universities, and secondary schools.

In its broad scope it takes into consideration three types of boys: those who are limited by the impediment of physical deficiency, those who desire the competition, the recreative and other social benefits of athletic games, and, finally, those who, because of the attributes of outstanding physical prowess, seek the master competition of intercollegiate athletics.

For the first group there are corrective orthopedics, individual instruction and classes in simple games and routines; for the second there are highly developed intramural programs which allow them every type of competition in which they can compete with fellows of their own athletic calibre; and, lastly, of course, there is the great program of intercollegiate competition which, although providing the unusually talented boy an outlet for his abilities, has been the subject of much abuse.

Following the last war, the leaders in physical training accepted calisthenics as being of great value in conditioning the boys of the country, including those engaged in various athletic contests. The older systems were modified so that they might contribute to the native American urge to compete.

Calisthenics and gymnastics will develop a boy physically. There is no argument there. Most young men prefer, however, to get their development and conditioning as a part of their competition in athletic games. As has been pointed out, it is not entirely correct to make a definite distinction between the two programs, for while the old Prussian military system precluded competition, the modern competitive programs have incorporated many of the best features of their predecessor systems.

The American boy does not very often become enthusiastic about the regimentation of mass calisthenics. It has been found that athletics will provide physical development, equal to the older systems and will offer more social qualities. The team idea and team spirit have grown directly out of athletic programs. Teams, of course, are the nub of intercollegiate athletics. While the athlete is instructed to compete as an individual he is, nevertheless, at all times made consciously aware of the moral responsibility of team inter-dependence. He is a team member whose individual effort will bolster the common effort of the group.

Commander Tunney in recently condemning competitive athletics makes some rather vague generalizations about "professional athleticism," "the era of wonderful nonsense," and turning the "training of men as military warriors into a sideshow."

In effect, Commander Tunney will not admit the benefits of a program which has been years in process under the careful, serious, and intelligently sympathetic guidance of national leaders of physical training. He would not incorporate the accepted benefits of intercollegiate competition—courage, reliability, special adaptability, intelligent thinking under stress, and hard physical fitness—into his physical training program

Commander Tunney has either unwittingly or purposefully revived the dormant question of calisthenics versus competitive athletic games. The concensus of American physical training leaders who have made a lifetime profession of their selected field is that we need both of these things. In the colleges and high schools, we need a complete program for *all* types of boys as we have already indicated.

Illustration 1.

Is Eight-Man Football Preferable to the Six-Man Game?

By Robert De Roo
Assistant Coach, North Central College

THE following brief description of eight-man football as we have played it for two years in spring practice at North Central College, suggests advantages over the six-man game.

Eight-man football was the result of an effort to get some effective scrimmaging done during the spring session. Previously, we found that baseball, track, and other spring sports took over half of the boys who would otherwise have been out for football. With a squad of twenty or twenty-one men, scrimmage on an eleven-man basis was impossible.

We rejected the six-man game for the following reasons: "First, it provided no adequate training for linemen in fundamental defensive and offensive line play: Second, it gave us no opportunity to rehearse the type of plays we would use in the fall.

A little experimentation, however, proved that with eight men on a team we could play a game that approximated regular football much more closely. Instead of seven men on the line of scrimmage we had five; one guard, one tackle, a center, and two ends. This gave our linemen a chance to work at regular line positions with only a slight variation from the conditions they would meet in the fall.

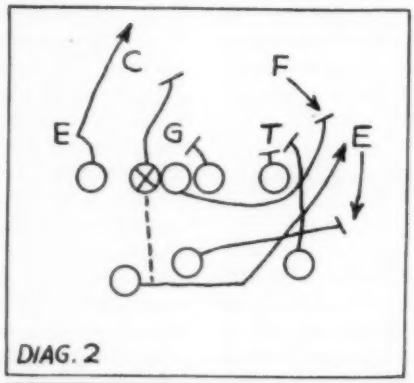
Our system calls for a tailback, a fullback, a blocking back, and a wingback. With only three backs available, we were reduced to a tailback, a fullback, and a wingback. We found it possible for this three-man backfield to carry out a diversified attack closely approximating that which we use during the regular season.

The accompanying diagrams and illustrations will show how closely eight-man football follows the principles of the regular game.

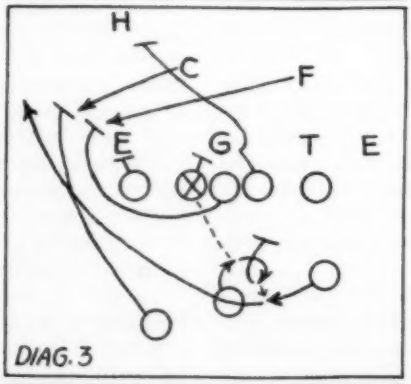
Diagram 1 shows a line-buck with the fullback leading the tailback through the hole. In eleven-man football the blocking back would have led the way, the fullback would have carried the ball, and the tailback would have faked a run or pass.

Diagram 2 is an off-tackle play with the fullback blocking the end and the tailback carrying the ball. In eleven-man football, the blocking back would have taken care of the end and the fullback would have led the play.

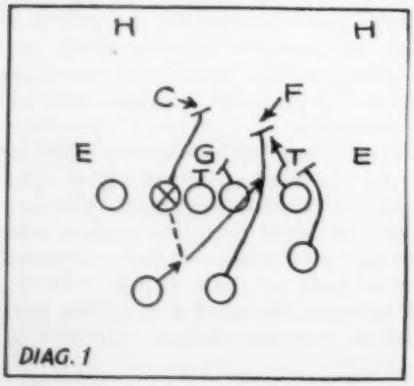
Diagram 3 is a reverse with the fullback spinning and handing the ball to the wingback. In eleven-man football the only difference would have been the ad-



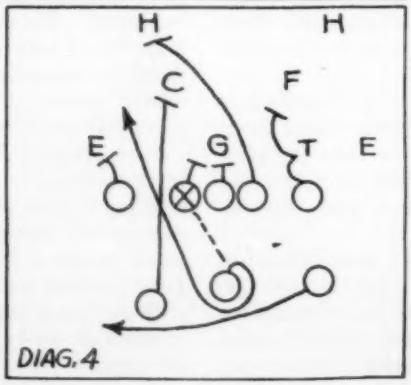
DIAG. 2



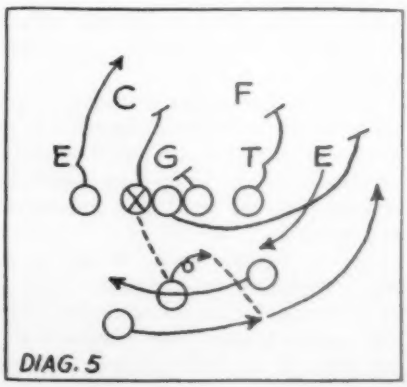
DIAG. 3



DIAG. 1

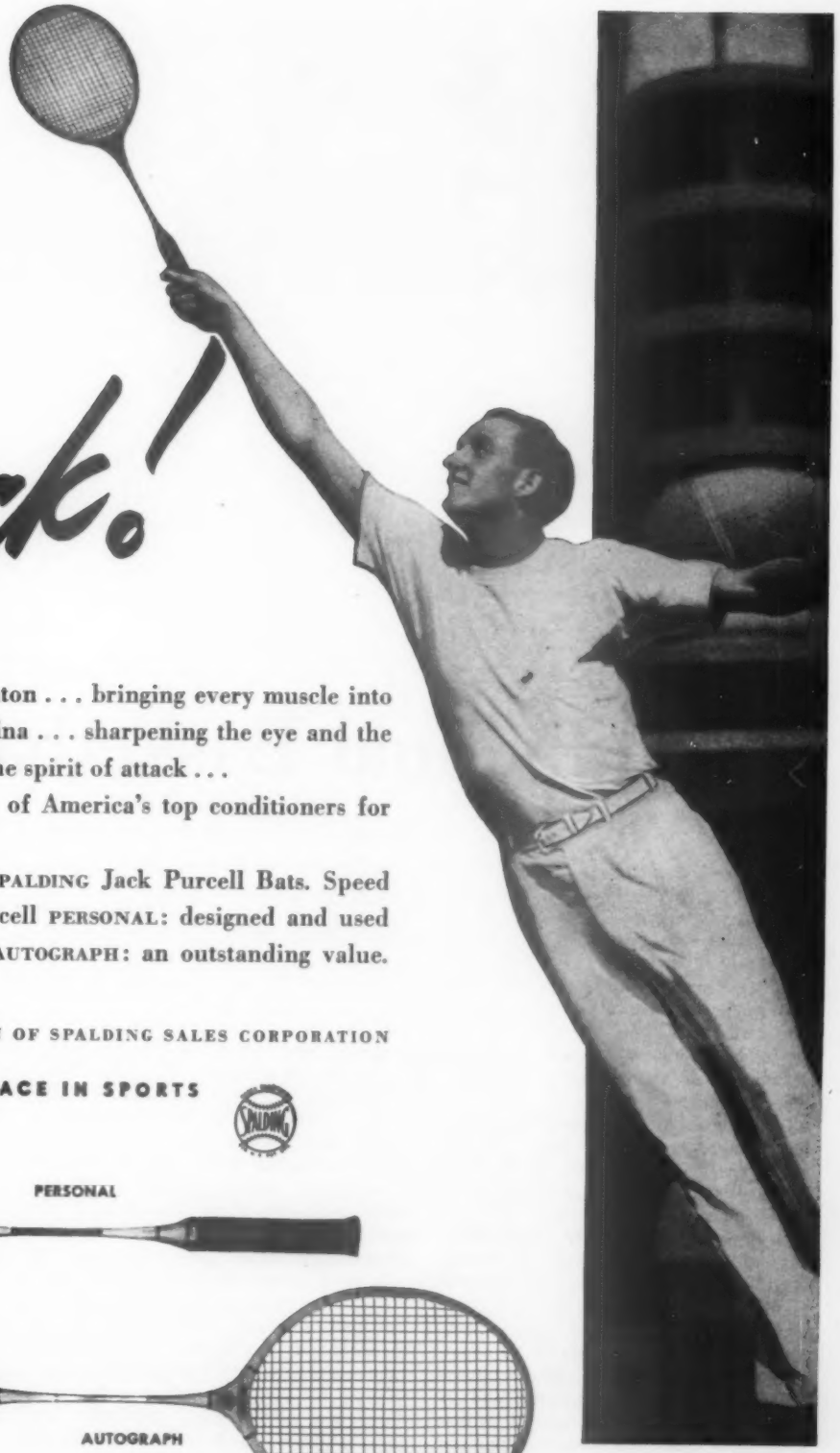


DIAG. 4



DIAG. 5

Attack!



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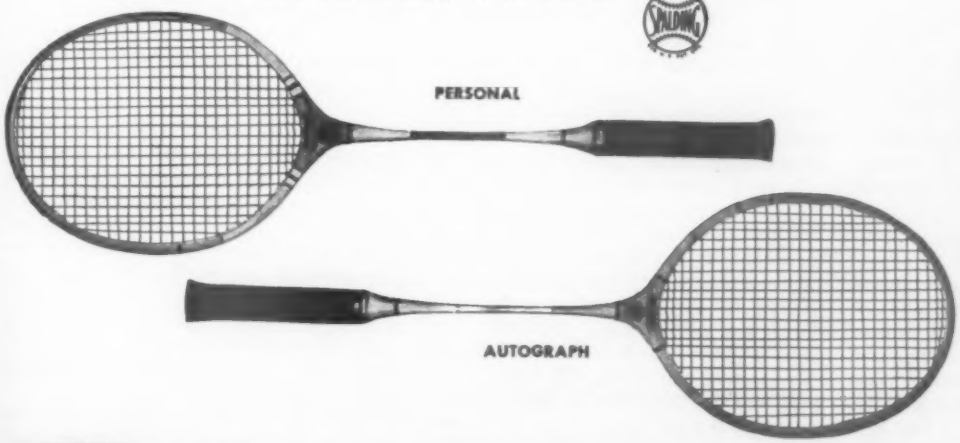


Spalding JACK PURCELL BADMINTON BATS

Illustration 2.

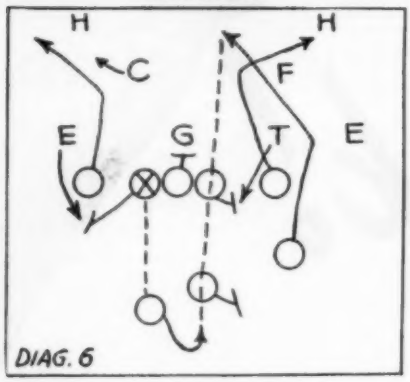
dition of the blocking back to the interference.

Diagram 4 is a fake reverse and a spin. Again, only the absence of a blocker alters the set-up from the same play in eleven-man football.

Diagram 5 is a lateral developing out of the reverse. In the game played as a wind-up for spring practice, this play went for a touchdown.

Diagram 6 is a forward pass. Again, there is very little difference between this and a similar pass which we use in eleven-man football.

I have shown the defensive team using a 4-2-2 defense. In some situations our teams have used a 4-1-2-1 and a 3-2-1-2.



DIAG. 6

Illustration 1 shows the reverse developing. The defensive end has been taken care of on the line of scrimmage. The line-backer on the short side (in the dark shirt) has been effectively taken out of the play by the tailback, but the guard who pulled out of the line missed his block on the other line-backer and the latter is shown just about to make the tackle.

Illustration 2 shows the same play being run again. This time the tailback has missed his block while the guard has made his.

Individual Basketball Play

By Joseph G. Daher
Basketball Coach, Manhattan College

MANY systems of basketball defense have been advanced, but whatever the team defense, the fundamental strength of any system can be no stronger than the defensive ability of each member of the team. The players of any system are called upon to guard men, with and without the ball, who employ offensive maneuvers and changes of tactics to offset the defensive strength of their opponents.

To be successful as an individual guard the boy must be mentally alert. The offensive player always has the advantage over the defensive player, because the defensive player most assuredly does not know the exact intentions of his opponent. You will hear an occasional, "I thought I had him" by a defensive player who was unable to stay with his offensive opponent, but such players are actually mentally sluggish on the defense.

Defense is hard work. The boy does not realize as much enjoyment and interest in this phase of the game as he does in offensive drills, hence more is required of the coach in perfecting defensive play.

There are essentially four factors in individual defensive basketball. The first fundamental is that of *position*. Generally speaking, the defensive player must be on a straight line from the offensive player to the basket. His distance must be such that he can best defend against the set-shot, the dribble, or the pass.

One of the first essentials for good position is that of proper balance, that is, a wide base with the feet comfortably spread, knees slightly bent, and the hips somewhat lowered. The player's weight must be equally distributed over the balls of the feet so that he can start and stop quickly, and at the same time, keep his opponent and the ball within his vision. He should take short steps and retain floor contact as much as possible. As the weight of his body is shifted forward to either foot, the rear foot is dragged in contact with the floor. This will enable him to stop almost instantly. The reverse procedure is performed when the guard is expected to retreat to guard his offensive opponent.

A good guard will make use of short steps in his various maneuvers so that he can recover himself while moving in any direction. In taking these shorter steps, he can move in close to his opponent, not offering his opponent any opportunity to throw him off balance in any way. The most common fault in individual defensive play is that the guard will rush his offensive player using long strides, and in an extreme case, he will even lunge at him, thus making himself an easy victim for a clever fake by the opposing player.

The second fundamental is that of *vision*. The zone defense calls for the eyes of the defensive player to be focused on the ball at all times. The man-for-man defense calls for the player to watch the ball with his direct vision while keeping his opponent in the field of his indirect vision, or sometimes to watch the opponent entirely.

The third fundamental is that which involves the *stance* of the player. The guard's feet must be moderately spread, flat on the floor, with the weight of his body centered on the balls of his feet. His head should always be kept upright. The joints of the arms, legs and hips, must always be unlocked so that he can exercise the necessary two-way movements. Thus, the player can instantly move forward, backward, to either side, jump or squat.

The last fundamental is *footwork*. When the player has mastered the foregoing requisites of the defensive position, this mastery can now only be maintained by quick, sound footwork. He must be drilled in the advancing movement (boxer's step), the sideward movement (glide step) and the retreating movement, which is performed by taking a quarter turn on either foot. Slowness in this execution almost always is the cause of a defensive lapse so common in basketball.

There is another important situation requiring emphasis. In playing the pivot man, the guard should play on the inside of him with an arm extended to decrease the passing area in his direction. If the pivot man is successful in receiving a pass, it is very important that the defensive

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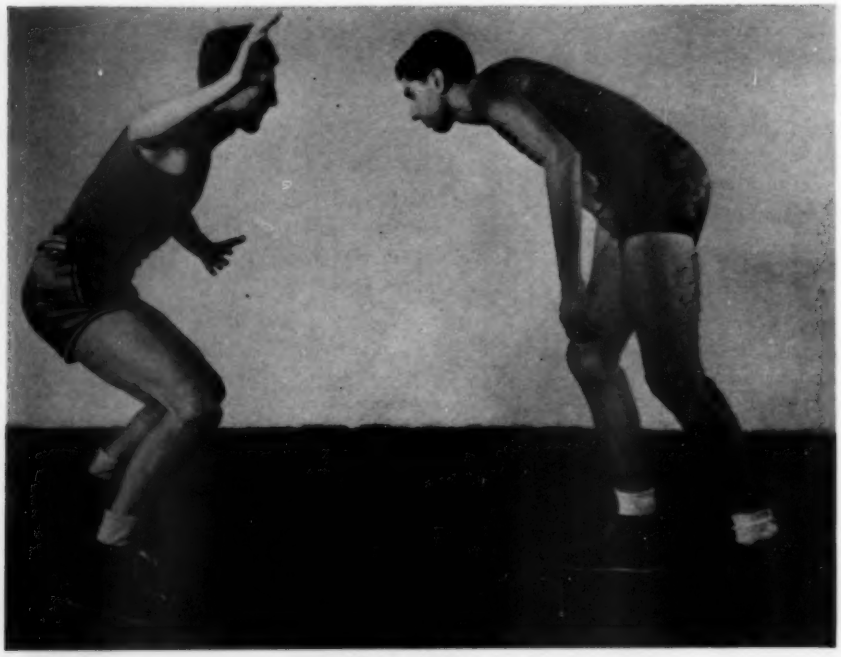


Illustration 1.

player immediately get into a position which will prevent him from taking a shot at the basket, or making a dribble in that direction.

In reducing individual defensive play to three major standpoints, one must include, guarding the man without the ball, guarding the man with the ball, and guarding the dribbler.

In the first case, it is of paramount importance that the guard be between the opponent and his basket, whether he does or does not have the ball. Each player on the team should be taught to designate the man he picks, both by calling, "I have this man," and by pointing, so that the entire team can function as a unit, defensively.

Illustration 1 shows plainly the importance of watching the eyes of the offensive player. The defensive guard has his weight on the balls of his feet, the knees are flexed, the back is rigid and straight, the hips are lowered slightly, the arms are stretched out, but slightly bent at the elbow to insure rapid movement for ball interception possibilities, and one foot is in front of the other to offer a better means of quick starting.

The first objective of the defensive guard is to locate the ball, so that the man he is guarding and the ball are within his vision. A triangle should always exist between the ball, the offensive player, and his guard. The guard will now be able to play both the ball and the man at the same time. The position of the ball will many times inform the guard of his opponent's anticipated move. He can be ready, therefore, to intercept passes, or beat him to any new position.

Modern basketball is deliberate and planned. The guards must be more alert today. An alert guard must be able, not only to prevent a screen play on himself, but also to warn his teammates of similar situations. When a player is screened, we assume, not literally, that he has been screened mentally rather than physically. When a guard is confronted with a screen play he should switch men with his team mate and guard, the player acting as the screen. To carry this through, the team mate who was guarding the player acting as the screen should be ready to switch and take the opponent of the guard who was screened.

In the second case, the player guarding the player with the ball has greater responsibilities. He must keep in mind these four points, namely, to knock the ball from the opponent's hands, to get a held ball, to block the opponent's pass attempts, or to break up an intended dribble. The desired arm positions under these conditions vary, but he should be allowed to use the position in which he feels natural and comfortable.

Illustration 2 shows an excellent guarding stance. The defensive player has the weight of his body on the balls of his feet; one arm is extended to prevent an intended shot or high pass, while one is on the ball; the knees are bent; the hips are slightly lowered; the back is rigid and straight, and the eyes are fixed on any maneuver the offensive player might attempt.

With his arms outspread at the sides, the guard takes up a large amount of floor area and forms an apparent barrier to the offensive's drive toward the basket. If the player is in a shooting position, the guard should have one arm raised to block a shot, but must be adept at dropping the other arm to break up a dribble drive, especially after a fake-shot-and-dribble maneuver.

A major problem in the mind of the defensive player is just how close he should be to the man with the ball. It cannot be pointed out here since the answer depends upon a number of factors. In the first place, the relative position of the man with the ball must be considered. If he is in the back court and apparently not in scoring area, he is not a threat at the moment and the guard should play him rather loosely, in most cases. As he moves into scoring territory, it is the duty of the guard to move in close with short steps,

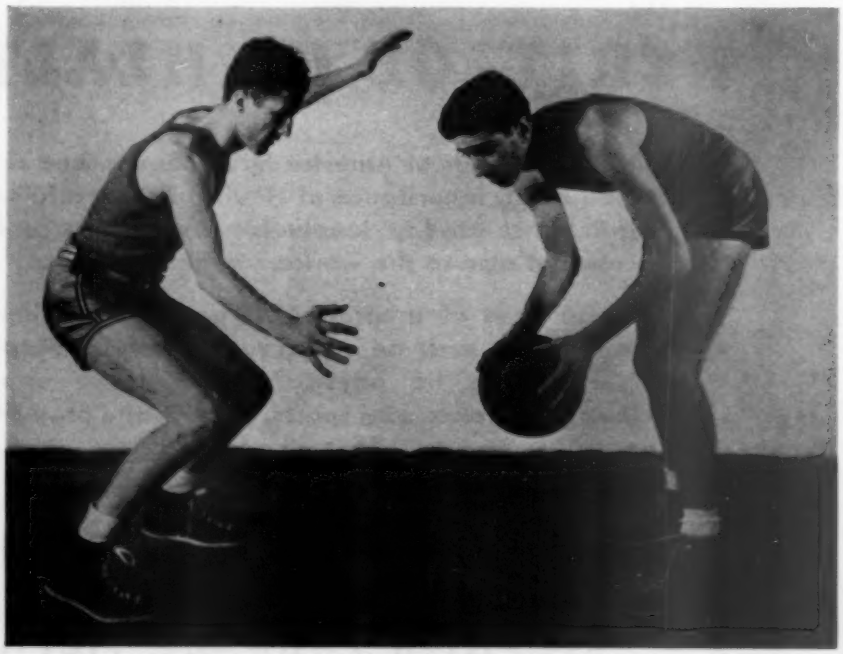
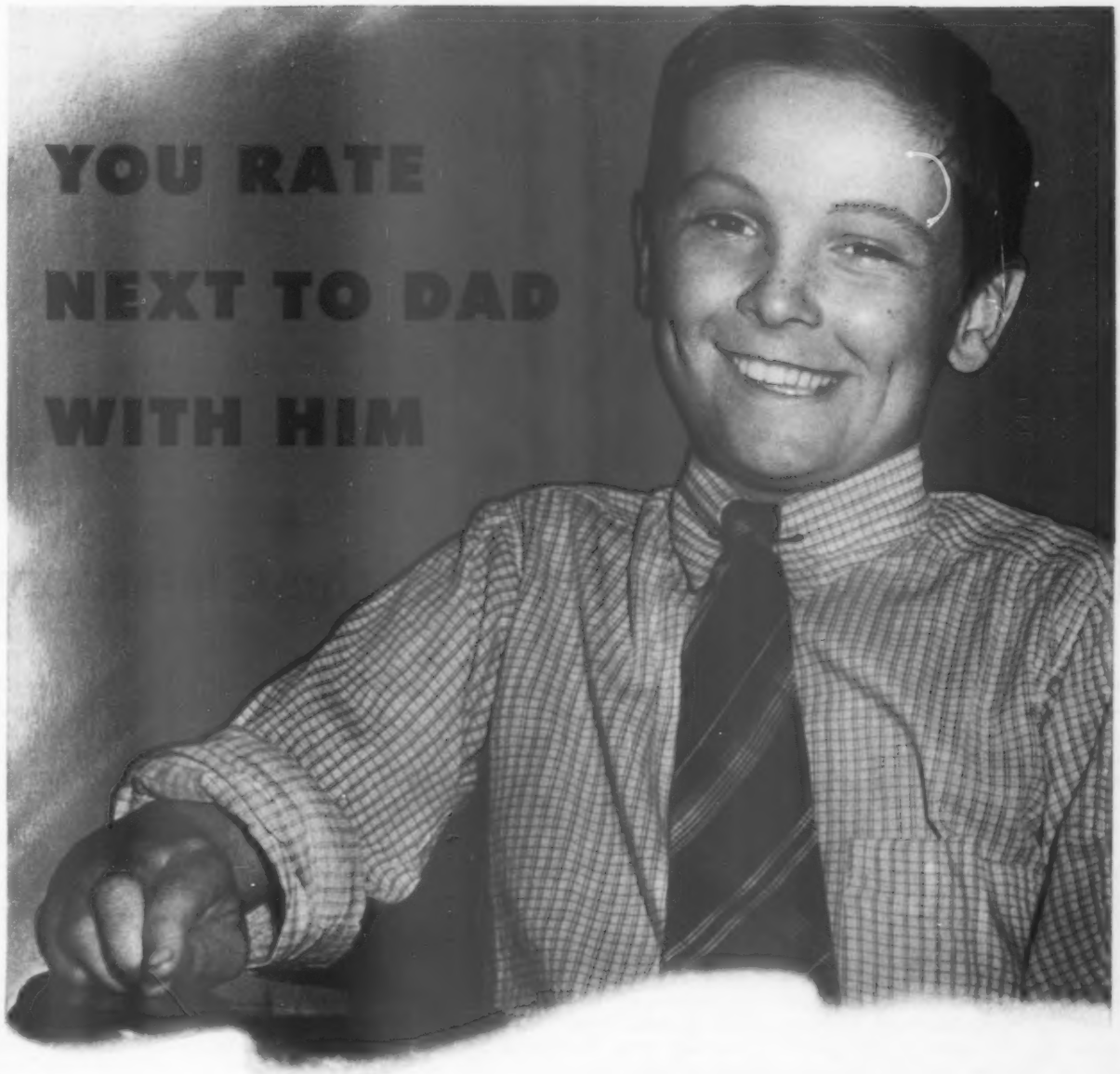


Illustration 2.



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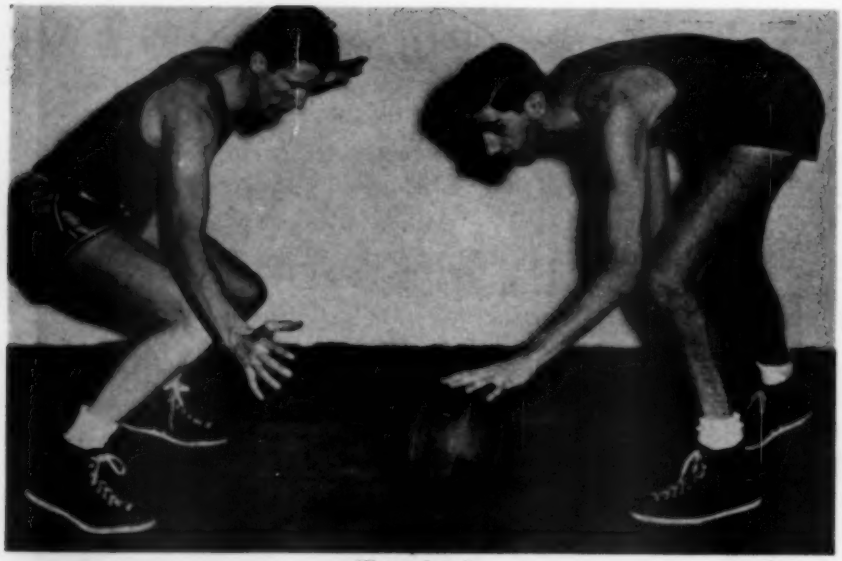

Illustration 3.

constantly watching for feints and pivots, to prevent, or at least hinder, a shot. If the opponent is a relatively poor shot, the guard may elect to get just close enough to hinder him, but allow him to shoot freely, in order to offer his team more opportunities to recover the ball.

The guard moving in on an offensive player should try to make him commit himself or as is commonly stated, "make him show." If he is aggressive and mentally alert, he can close in on the offensive player and obtain a held ball, or at least hinder a shot. Many guards habitually "give up" mentally after the ball is passed or a shot is taken. This places the guard at a disadvantage, as the offensive player can use this short defensive lapse to out-maneuver his guard.

It is a common tendency to over-guard and underguard on the part of inexperienced players. It requires a great amount of effort, skill and mentality, to guard cor-

(Continued on page 38)

Touch Football Adapted to the Classroom

By E. R. Abramoski
Erie, Pennsylvania, High School

EDUCATION through the physical has no better media for expression than thoughtfully planned, well-organized games supervised by experienced and thoroughly qualified teachers. Teachers of physical education, however, find that, although there is an abundance of drills and games for the pupils in the grades, the selection is limited when the junior high school and high school levels are reached.

In seeking to employ games that have embodied within their realm such natural bodily exercise as running, leaping, stretching, etc., the teacher employing the games curricula has found his choice of games for the various seasons, greatly limited or unsuited for the large class. which he must conduct.

Football, the most highly organized of the competitive group games, and containing nearly all of the natural bodily exercises, admirably fills the bill for interscholastic competition, but is unsuited for the classroom because, it is too hazardous, and requires too large an expenditure for protective equipment, and spacious facility for play. Nevertheless, eleven-man football has been very effectively used in the intramural programs of those schools which have available adequate physical facilities.

Six-man football, which has had tremendous appeal in the smaller schools as an interscholastic sport, because it requires a lesser personnel and a smaller field, has also had success as an intramural sport. It, too, has been found to be unsuited for the classroom because it is too combative, and too hazardous to be played on a gymnasium floor. Like football, it would drain the school's treasury if each participant were to be adequately equipped.

Touch football, although lacking the bodily contact, and the combative qualities of either the eleven- or the six-man game, is perhaps the most suited for classroom competition. By the modification of rules to suit the personnel and the physical plant, the game is readily adapted to the classroom. Tag football, as the game is sometimes called, has long been used in the intramural programs of those schools where the seasonal curricula is fostered, because it requires very little financial outlay. As a competitive classroom game, however, it has been almost entirely unexploited. The reasons for this are two:

1. Eleven-man touch football requires a large floor space for satisfactory performance.

2. The touchdown basis for pupil turnover has proven too slow and unsatisfactory, in that a large number of the pupils are forced to a spectator status, and are not active participants.

To overcome the obstacles mentioned above, experiments were tried which have shown clearly that the six- or eight-man team performs best on the ordinary basketball floor.

To erase the pupil turnover handicap, the touchdown as a basis for a team turnover was scrapped and four series of downs substituted for it. In other words, instead of waiting until a team scored, before permitting a fresh group of participants to take the floor, the players who lost the ball on downs, were immediately replaced.

In the use of the innovations suggested above, it was discovered that two methods of team turnover could be used and classes numbering as high as sixty pupils could easily be handled. The teams, if the first plan were used would be numbered 1, 2, 3, 4, etc., and would rotate in that order, that is, teams 1 and 2 would take the floor, and the offensive team would employ its series of four downs in an attempt to score. Failing to score, the offensive team 1 would retire and team 3 would come into the game on the defense, and if it failed to score at the end of its series of four downs, it would relinquish the floor to team 4 who would enter the game as the defensive team, while team 3 which remained on the floor, would become the offense. Thus, it can readily be seen that we have two squads vying with each other; one the odds (1 and 3) and the other, the evens (2 and 4) with entire teams being substituted, following each series of downs. All replacements should be made at the spot of the last down.

One deviation is made. When a team scores a touchdown it remains on the floor, and the losers leave the floor. The incoming team is given the option of kicking or receiving.

Let us assume that teams 1 and 2 were playing and team 1 scored a touchdown on a safety, team 2 would then leave the floor and team 4 would replace it with the option of either kicking or receiving. If the players chose to receive, and did not score in the specified series of downs they would relinquish the floor to 4 again who would come in on the defense, 3

(Continued on page 41)

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By L. B. Icely, *President*
Wilson Sporting Goods Co.

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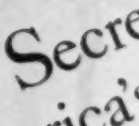

mark you hear everywhere these days—"America lives out-of-doors." America is active. America is outdoors . . . and as a result, America is the confidence of many people. The confidence of many people. America is strong in a world where country after country has gone down under the conqueror's ruthless heel.

its women are strong and athletic, too, that country has strength, courage and confidence in everything it faces.

Inborn love of athletics and of recreation competitive games has given American youth athletic vigor and body. That is primarily why America is ready and not only ready but eager to go into a formidable fighting machine. That is primarily the reason we have been sure that we shall not fail in the things and decisions to live up to the

never. I think no one will deny, has been one of the most important factors in increasing the awareness of play and exercise among America's millions.

The better material and better design that goes into today's golf clubs and balls, tennis rackets and balls, football, basketball, softball, baseball, basketball, speedball, handball and gym equipment provides an exercise greater than has ever been known before, for an active, health-

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What a phenomenal nation we would be time of war. How incredibly successful our efrts would be in the armed forces and on the proaction lines and the home front!

"On the fields of friendly strife are sown the seeds hich, in other years on other fields will bear the uits of victory."

So spoke Gen. Douglas MacArthur. And let no one ll you that American sports do *not* play a vitally imrtant part in conditioning men for strenuous service our armed forces.

Physical education, routine setting up exercises, form ound basis for all hardening processes. I would like to see this routine made a *daily* routine in every school and college in America for both sexes.

But, it is through our active competitive sports that speed, coordination, the will to win, and moral as well as physical strength, are developed.

Today every school and college should do its part, through regular calisthenics and sports, to prepare boys and men for the sterner physical tests of army, navy and air force—and for the stamina-testing hours in factory and on the farm.

Today we should plan, so that *tomorrow* our boys and girls and our nation, may have the benefits of routine physical education and sports from earliest school days on.

My company stands for the indispensable value of American sports to a successful war effort. We are expressing that stand to all of America. And, as far as war needs permit, we will continue to supply the *implements* of these sports.

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T'S Wilson TODAY IN SPORTS EQUIPMENT

Army Physical Conditioning

(Continued from page 9)

ditioning and developing the body, but they also give soldiers practice in activities that are similar to, or identical with, activities which many of them will be called on to perform, when engaged in fighting.

The exercises included in this type of drill are of two general types:

(1) Routine exercises. These are performed while the unit members are moving forward in a circle.

(2) Alert exercises. These are special exercises the class members perform at irregular intervals during the course of the drill period.

The manner for conducting the routine exercises is described below. (The manner for conducting the alert exercises is described later).

Routine Exercises. The class is assembled in circle formation. If the unit numbers between 10 and 30, place the men in single file (single circle), if between 30 and 60, place the men in pairs (double circle). The men should face right, around the circle—each man (or pair) about eight feet behind the man (or pair) ahead.

After the group has been arranged in circle formation, the instructor directs the members to walk foward at a slow relaxed pace—80 to 90 short steps per minute—keeping the circle formation. (The class does not walk in step). The instructor, standing in the center of the circle, calls the name of an exercise, then demonstrates it, and then commands "Start." Immediately, each member starts to perform the exercise, continuing to move about the circle. After performing the exercise for an adequate period (10 to 30 seconds), the instructor commands "Relax," upon which all class members resume the original slow walk. After a sufficient pause (5 to 15 seconds), the instructor names and demonstrates a new exercise, and at the signal "Start", the class starts to perform it. The routine exercises are all performed in this manner.

It will be noted that at all times (whether walking or performing the exercise) the performers continue moving around the circle. The length of the period of exercise and the period of rest will vary with the nature of the exercise and the condition of the men. The participants should be required to maintain these positions in the circle at all times. The instructor should require the class members to execute all orders instantly and further should require all members to continue to perform each exercise until the command "Relax" is given. Order should be maintained at all times.

There are four types of exercises: (1) ground (on hands and feet), (2) squat-bend (bending legs or trunk), (3) erect, (4) double (in pairs). In general it is advisable to use a variety of the first three types for the first part of the period and then close the period with two or three double exercises of a short dog-trot run.

Exercises carried on one foot, such as hopping, may be transferred to the other foot by the command "change."

Some of the more common exercises that may be used in this type of work are as follows: Others may be designed by the instructor.

1. *Ground Exercises.*

All-Fours. Face down on hands and feet, walk forward.

Bear Walk. Face down on hands and feet, travel forward by moving the right arm and right leg simultaneously, and then the left arm and leg simultaneously.

Leap Frog. Count twos. At whistle, odds leap over even numbers. At next whistle, evens leap over odds. Repeat continuously, raising the back higher and higher.

Bouncing Ball. Support body on hands and feet—hands at shoulder width, feet 24 inches apart, back and legs in line. Travel forward by means of a series of short upward springs of hands and feet simultaneously. (Bounce the hips up and down.)

2. *Squat-Bend Exercises.*

Duck Waddle. Assume knees-bent position, hands on hips, retaining this position, walk forward .

Squat Jumps. Assume a knees-bent position. Retaining this position travel forward by short bouncing jumps.

Indian Walk. Bend knees slightly, bend trunk forward, arms hanging down until back of hands touch ground. Retaining this position, walk forward.

Crouch Run. Lean forward at the waist until trunk is parallel with the ground. Retaining this position, run forward at a jogging pace.

Steam Engine. Clasp hands behind the neck, walk forward in the following manner. As the left leg is brought forward, raise the knee, bend the trunk forward and touch the right elbow to the knee, then step forward onto the left foot and raise the trunk. Repeat with right leg and left elbow.

3. *Erect exercises.*

Walk on Toes. Walk forward on the toes.

Fast Walk. Walk forward at a fast pace, swinging arms vigorously (avoid running).

Staddle Run. Run forward, leaping to the right as right foot advances, leaping to the left as the left foot advances.

Knee Raise Run. Run forward, raising the knee of the advancing leg as high as possible on each step.

Hop—on Left Foot. Travel forward by hopping on the left foot. Take long steps. Change to right foot and repeat.

Broad Jumping. Travel forward by means of a series of broad jumps off both feet.

4. *Double exercises.*

Before starting these exercises, have the group count off by twos, then place them in pairs (side by side). In all cases the "Ones" carry the "Twos" at the signal "Start." At the signal "Change," the men reverse positions. "Twos" carry "Ones," and continue the same exercise. On the signal "Relax," both resume their original positions and walk forward.

Army Carry. "One" standing sideways beside "Two," bends his knees and leans forward placing one arm behind "Two's" back and one arm under "Two's" knees. "One" straightens up, lifting "Two" from the ground. "Two" places near arm around "One's" shoulders and clasps his other hand. Retaining this position, "One" runs forward.

Fireman's Carry. "One" standing sideways in front of "Two" bends his knees and leans forward placing one arm through "Two's" crotch. "Two" leans forward until he lies across "One's" shoulders. "One" straightens up, lifting "Two" off the ground. "One" using the hand of the arm through "Two's" crotch, grasps the wrist of "Two's" arm that is hanging over his shoulder. Retaining this position, "One" runs forward.

Cross Carry. "One" standing sideways in front of "Two", leans forward. "Two" bends forward until he is lying across the middle of "One's" back. "One" then places one arm around "Two's" knees, and one arm around "Two's" shoulders, and straightens up lifting "Two" from the ground. Retaining this position, "One" runs forward.

Single-Shoulder Carry. "One" standing in front of and facing, "Two", assumes a semi-squatting position. "Two" leans forward until he lies across "One's" left shoulder. "One" clasps his arms around "Two's" legs and straightens up, lifting "Two" from the ground. Retaining this position, "One" runs forward.

Grass Drills

There are numerous activities which are frequently used by large groups training for mass conditioning. Much of this type of activity requires the man to go down on the ground. These exercises are usually called "Grass Drills." These drills should be executed vigorously, quickly and with precision. Since these activities require a considerable degree of endurance, the men should be coached to give with all they have, and to continue to drive into the activities, even after they are very tired. The ones suggested for use here are as follows:

1. *Front-Up-Back-Up.* Upon the com-

mand of "Front," the men flop down quickly onto the ground on their bellies, as in position for firing. On the command "Up," they leap to their feet, and do a vigorous stationary run until the next command. On the command "Back," they drop down on their backs, and on the command "Up," again spring to their feet and do a stationary run. When on their bellies, the command "Back" means to flop over onto their backs (Not by rolling over, but by thrusting legs through the arms) and vice versa. Vary the commands, so that the men will not be able to anticipate the next movement.

2. *Go-Stop.* With the command of "Go", the men spring *fast* forward as a football team would do in running signals. At the command of "Stop," they stop and drop to the lineman's crouch. At "Go" they again spring forward. This may be varied by the command "Flop" which means to go to the ground on the belly. If the command is "Right," they turn and sprint to the right at an angle of about 45 degrees. "Left," in like manner simply means to go to the left an equal amount. "Go" in each case, means straight forward again. "To the rear" reverses the direction. The commands of 1 and 2 may be combined after each is learned separately. Keep this up for at least five minutes.

3. *Zig-Zag Run and Flop.* The men, upon the signal to go, run fast about 45 degrees to the right, and when the whistle sounds again, zig-zag 45 degrees to the left and on a second or two blasts of the whistle flop to the ground. Upon hearing the next whistle, they spring to their feet, and run rapidly to the right, continuing as above until commanded to halt. This may be by a long blast on the whistle.

4. *Zig-Zag Run and Squat.* Same as above, except on the whistle, instead of flopping to the ground, the men come to a full squat with hands on the ground. This is usable with wet grounds.

5. *Sit Up.* Lying on back on ground with arms over head, sit up, knees straight, and reach forward, touching toes with hands. Return to ground.

6. As No. 5, above, but with feet apart, and touch first the toes of one foot, and then the toes of the other foot with both hands.

7. *Legs Overhead.* Lying on ground, arms above head, swing legs up and back over the head, touching toes to ground behind head.

8. *Bicycling.* On back, legs above trunk, elbows by the side, but hands on hips, holding the hips up, make vigorous bicycling movements. Make these movements very large.

9. *Head and Feet Up.* Lie on the ground, arms by the sides, palms on ground. On the command, with the hands near the sides of the hips, either forward a bit or backwards a bit, according to the needs of the man, with the knees straight,

(Continued on page 40)

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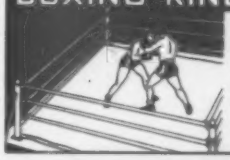

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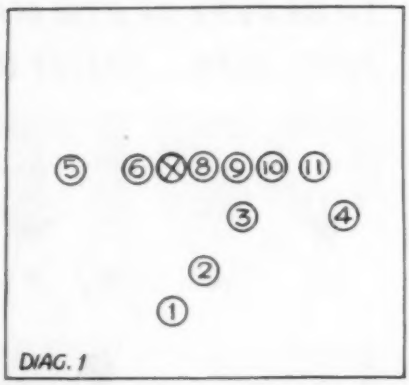
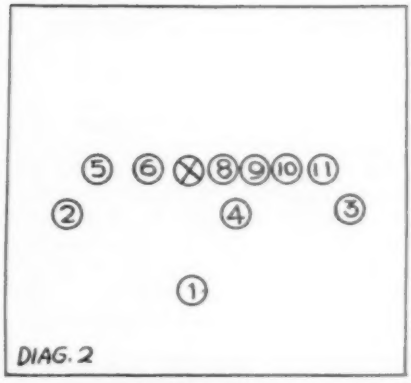


DIAG. 1



DIAG. 2

Touchdowns With and

By Walter J. Hunting

Selection of a System

OUR present world conflict brings about a striking similarity to the game of football. No matter how long we remain on the defense in order to win, we must, sooner or later, take to the offense. In football, one may ask, "What offense?"

It is only natural that a coach just starting out uses the offense that he knows best, the one he played under while in high school or college. Such an offense might work very well even from the beginning, or it might not work at all. At any rate, sooner or later most coaches are going to adopt the system best suited for the material on hand, even though it requires a shift from the one known best by the coach himself. This is a certainty, if one is going to remain in the coaching game and be successful. This does not necessarily mean that the coach must throw his system of play into the discard each year and adopt a new one, but rather, he must analyze the material he has each year and then adapt the system to it. It might also be necessary for a coach to change to another system than the one in use because his opponents are getting too well acquainted with the one he has been using, or possibly because the players are losing interest in the one that has been used. Whatever the reason may be, a coach should at least be sure each year that he is employing those tactics or system that will obtain the very best results and win as many games as possible.

The test of time has narrowed the offensive systems down to a few. These, of course, are used by coaches with variations, such as a balanced or unbalanced line, ends in or out, or even with a man in motion. These variations might be used with any system according to a coach's own wishes, but the main formations have lived and come down to the present time because of definite reasons that have made them stronger than others that have faded away. These reasons might be listed as follows:

1. Strong running, plunging, and passing plays may be used from each.
2. Deception, or the element of surprise, as to the type of play to be used each time.
3. They can be used very well in conjunction with any other formation.
4. Proper timing between blockers (backfield and linemen) and the ball-carrier, so that the hole opens at exactly the right time.
5. Capable of having new types of plays as time goes on.
6. Adaptable to various types of material which changes from one year to another.
7. Attack is just as strong at all points.
8. All plays start out exactly the same.

It is not the intention of this article to cover all tested formations, but rather to go into detail with four of them, the single wing-back, double wing-back, Notre Dame system, and "T" formation. I shall analyze each as to strength and weakness, and go on to give what I believe the most important, and yet the most neglected phase of the game, the touchdowns we get or can get without any system whatsoever.

The Single Wing-back

This formation (Diagram 1) must, without any question, be conceded the No. 1 position as an offense throughout the country. Its wide use started in the early days of football, and it has maintained its popularity down to the present time. The general success, as each year passes, makes it popular for the following year. If we analyze this formation, we can readily see, that its great strength lies in the ability of the best linemen to concentrate or shift just in advance of the best backs. It, therefore, has its greatest strength in line plunges, slants, end runs, and passes to the strong side with perfect timing on all of them. This enables it to be used with exceptional material or with only limited material, as when a coach has only two or three good linemen and possibly only two good backs. With the development of mousetrap, spinner, and lateral-pass plays, even plays to the weak side are much stronger than they used to be considered.

This formation is probably the easiest to coach of any prime formation that we have in football. It may be made complicated, but at least, a minimum of ball-handling is necessary for the execution of plays. This makes it effective on wet or dry fields. It is also almost as strong on one position of the field as another, and because of the possibility of concentrating power in one place, it is an excellent goal-line formation for scoring.

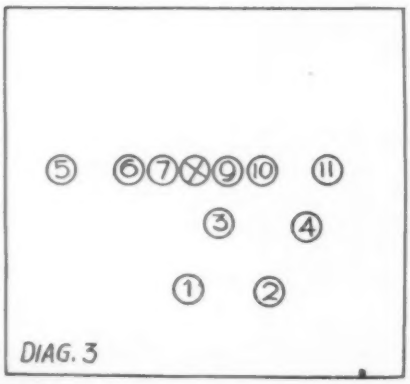
Its widespread use and its simplicity are, no doubt, also its greatest weakness. The mere fact that coaches know it so well enables them to set up a defense that will stop it sooner or later. Many weak defensive teams have stopped it, because they know where the point of attack is going to be, and are there at the proper time to stop it. The element of surprise is lacking with only power remaining.

The team is usually formed by placing the best ball-carrier and passer in the No. 1 position, the fullback in the No. 2 position, the blocking back in No. 3, and the wing-back in No. 4. The two best linemen for running interference and blocking for passes are put in No. 6 and No. 8 positions. The two best men for opening holes straight ahead are placed in No. 9 and No. 10 positions, the best blocking end at No. 11, and the best receiving end at No. 5 position. Usually the weak-side end is shifted out a little, or both ends may be split, depending upon the desires of the coach.

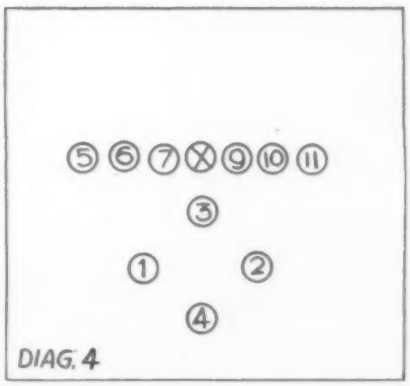
The Double Wing-back

Any formation with two wing-backs instead of one is classified as a double wing-back formation regardless of the positions of the other two backs, or whether the ends are in or out, or whether the line is balanced or unbalanced. Since its innovation by "Pop" Warner, when most of the plays were run from a formation, such as the one shown in Diagram 2, coaches have changed it by moving the No. 1 back to about four and a half yards, and the No. 4 back to three and a half yards. Regardless of any of these changes, the strongest threat comes from single, double, and triple reverses with possible passes from each, and good spinner and plunge plays going through the center with the wing-backs used as decoys or for blocking. Quick kicks may also be used very effectively from this formation.

The system itself can no longer be considered as new, or in the experimental stage. It has taken its place as one of the major formations in the country in both high schools and colleges. There is no doubt that it is the most deceptive formation in football. Coaches, throughout the country, have been very wise to select this as their system, only when it can be used by the material on hand. With small fast



DIAG. 3



DIAG. 4

Without a System

Athletic Director, Denfeld High, Duluth, Minnesota

backs, all of whom are excellent ball-handlers and shifty, and with a line that can keep up with them in blocking and running interference, it has brought excellent results.

The inability of the average coach to have a squad of men who possess the qualifications necessary to warrant using this system must be considered one of its weaknesses. That is the reason that it is not more extensively used. It is also impossible to obtain maximum power at all points of attack, which is possible with other formations. It has been most effectively stopped by the defense using a hard charging line with smashing ends who are able to penetrate into the heart of the attack before plays get under way. When this proves successful, the attack appears to be very weak. It is probably not the best formation to start out with, if the material on hand is not known or if a coach has not had an opportunity to study the system thoroughly.

The Notre Dame System

One must, at the very beginning, realize that the Notre Dame system is in reality a combination of the prime T-formation with a shift resulting in a box formation to the right or left. It has long been an outstanding feature of this system to have a few strong plays from the T-formation. This idea, of course, is to keep the opponents from knowing what is coming next, a play directly from the T, or a shift into the box with the ends split. As everyone probably knows, this combination is used strictly with a balanced line. I can plainly recall Mr. Rockne himself explaining the advantage of this in one of his coaching schools. He claimed the strength gained on the strong-side plays by using an unbalanced line brought about a corresponding weakness to the weak side; while in his system, the strength was equally divided on both sides, regardless of which way his backfield shifted. This has proven to be true. Although those using the system have occasionally changed the relative positions of the men in the backfield, I do not know of anyone using the system with an unbalanced line. That feature has stayed with the formation from the beginning.

Besides having plays from the "T," this offense as shown in Diagram 3, as it looks after the shift, has brought the best results with fast men both in the line and backfield. Perfect timing must be had on all plays, and excellent blocking must take place, for it is mostly a man-for-man affair. The addition of spinners and fake reverses has added materially to its strength, for its strongest plays today are of this type, along with strong-side and weak-side runs, reverses, and passes. All in all, about every type of play used in football may be used with this formation, but the timing and blocking must be perfect to insure success. With any ingenuity at all, a coach may take this system, gain more than average success with it and work out new possibilities with it. It is only a matter of the type of plays on which one wants to put emphasis, for it is exceedingly flexible.

Power plays into the line are, no doubt, the weakest type for this offense. Against a hard-charging line, especially one in which the ends are employed, it is somewhat difficult to throw long passes or to get plays under way with it. This seems to be the outstanding weakness, or at least, the way the defense has most successfully stopped it.

The "T"-Formation

There really is not so very much difference between the old, close, compact formation, as used so successfully years ago by many coaches, and the present "T"-formation, as modernized by Halas and Shaughnessy. Basically, they are the same formation. Only today, it has been opened so that more air can sift through among the backfield men and between the ends and tackles. The formation, as originally used, placed the emphasis on power plays with the quarterback sneak, cross-bucks, and quick opening plays being employed. It was practically limited to types of plays of this kind, but even at that it won many championships for coaches using it. It was easy to coach and hard to stop because of the power. One year, when nothing seemed to go right with the system on which I had been drilling my team, I switched to the "T"-formation just one week before the first game. It worked so well right from the start, that we used it the rest of the season, and won every game played.

The present-day "T" has changed the formation so that a larger variety of plays are possible with a great deal more deception in them. The same plays that used to be worked are still possible, plus the possibility of plays with a man in motion. This one thing seems to have complicated the offense for coaches and spectators alike. In reality, this should not keep anyone from using it, for this only adds variety to the offense and confusion to the defense. The essentials in the offense are: a smart quarterback who has the ability to mix his plays properly, and a couple of quick-starting backs. As the quarterback does most of the passing, he should also be very good in that phase of the game. The formation may be used either with big or little men in the line, but of course, the plays used would have to be determined somewhat according to this. There is very little running interference on the part of the linemen, but they should be good individual, close-line blockers, in order to have the quick opening plays work well.

As one can readily see, power plays with mass interference are not as possible with the new open "T," shown in Diagram 4. This, however, cannot be considered a weakness, if a team has the ability to throw individuals into the open for runs or passes. Weakness then, on any of the plays, would show up only if there were not the proper ball-handling, timing, and blocking to make the plays work. The individual man-for-man blocking necessary on most of the plays might make it somewhat hard for the average high school group to master.

Without a System

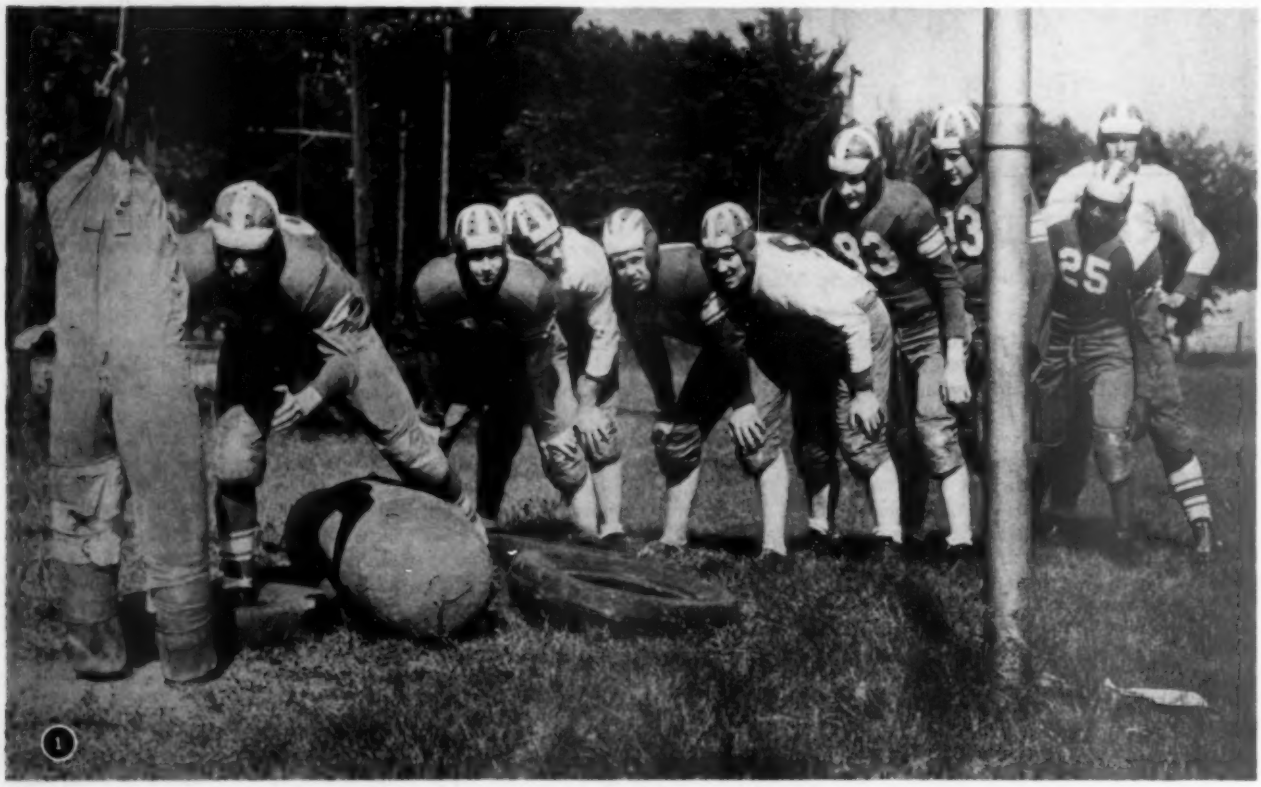
It is a well known fact that every football team must have some kind of an offensive formation. This is necessary in order for it to advance the ball by a series of scrimmage downs after getting possession of the ball and failing to score by one of the methods described below. The foregoing systems are only a few in use today, and I have endeavored to touch the high points only as to strength and weakness of each without giving any plays whatsoever. I have used each system with success during the past twenty years as a coach, although at present I am using the "Y" formation which was given in detail, with illustrations, in the March and

May issues of the 1942 ATHLETIC JOURNAL.

More than emphasizing any particular system for our team, we are really after results. We all want to win each game played, and we can do this only by outscoring our opponents. Sometimes, I really believe that our systems are over-emphasized, and not enough time put on the other means of scoring that in reality have won many games for us and would win many more if more time were spent on them. As each season passes, we can only reminisce to realize how each game played was won or lost. If we will do this, I venture to say that many of the games played were won by one method or another described in the rule book, as free-kicks (these include the kick-off, a safety-kick, and the fair catch-kick), intercepted passes, advancing blocked punts, and returning punts.

Our fall practice is, on the average, only twelve weeks long, and if practice sessions

(Continued on page 40)



Since the scrapping of rubber tires, sand bags are used.

Coaching the Six-Man Defensive Line

By Forrest W. England
Coach, High School, Jacksonville, Illinois

THERE is probably no other place in football coaching where a coach can see more benefits from hours spent with his boys than his defensive line. If the backs happen to be the slow, bulky type and all the fancy offense that a coach can devise just does not bring as many touchdowns as are needed to win, may I suggest that attention be put on the defensive line.

From the first day of practice an attempt should be made to build an esprit de corps among all line candidates; competition to outshine the backfield may be stressed.

On all dummy tackling practice we ask the boys to zig-zag, stepping through old tires from a distance of always less than five yards before tackling the dummy. Illustration 1. This set-up represents the difficult tackling position faced by defensive linemen in a ball game. They are constantly asked to jump over a prostrate player, throw their bodies sidewise and in all sorts of contortions, tackle the driving ball-carrier.

We are great believers of talking and spirit on the part of every defensive lineman. They help greatly to keep up the morale. We find nothing can take the place of an enthusiastic boy in the defensive line. This talk and chatter is needed, even though it may cost some energy and wind.

Just as every other type of defensive line, the six-man line has its vulnerable points that must be protected by the proper placing of the line-backers and backfield men. We strive to have our defensive linemen not take their final charging position immediately upon lining up. Just before the ball is snapped, there is a favorite point from which we like to have each boy become efficient in breaking through the offensive line. Those defensive lines that do not take the same position successively tend to muddle the thinking of the offensive quarterback, who has learned to select his plays according to the position of the defensive linemen. In our opinion, this makes it necessary to call plays by signals after the offensive team has taken position. If the opponents use the huddle system, a definite

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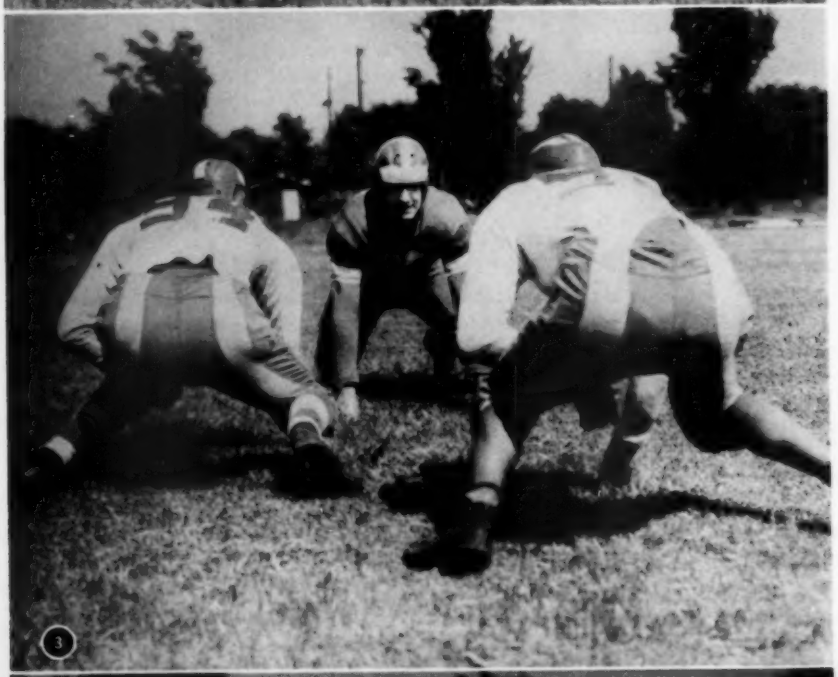


check system is necessary for anything approaching proper play selection.

The Ends

For some reason that has come about through eight years of coaching experience, I seem to rest more easily when my toughest defensive boys are at the flanks. Any time I see a back getting outside of our ends, I get a "touchdown shudder." When opponents move up the field inside our ends, I get a "first-down shudder," and this too, has often turned quickly to a "touchdown shudder."

The ends, and the weak-side tackle are the only men on our defensive line who line up with a three-point stance. Under ordinary conditions, our ends set up three yards from the tackles with the inside leg slightly back. We insist on a fast three-step charge at a ninety-degree angle. The first step is taken with the inside foot. This fast initial charge should end with the inside arm and shoulder dropped over the inside knee. See Illustration 2. This means the end is low and in a good position to split interference or duck under and spill would-be blockers. This fast initial three-step charge gives assurance that blockers are going to find very little desirable blocking surface. From this original thrust, the end plays according to his analysis of the play. This type of end play is not the radical type of a slicing end, neither is it the conservative play for a waiting end.

We spend considerable time instructing the defensive end concerning situations and plays where he may be confronted with a flanker who seeks only to get a good angle on our end's outside. Sometimes this flanker situation may develop from the opponent's man-in-motion offensive. We instruct our end never to move out more than seven yards from his tackle, even though the flanker still insists on being to his outside. When the ball is snapped, the end must first concentrate on the flanker by charging him, then, heads up for the play. If the opponents insist on a flanker offense, for which I have all the respect in the world, necessary defensive adjustments on the part of our backfield are absolutely necessary.

Against the lateral pass we always instruct the ends to go wholeheartedly for the man with the ball. He must pay no attention to fakes. The line-backer or halfback concentrates on the player seeking to receive the lateral. On pass defense we commonly ask the right end to take his initial charge, then retreat to the flat area to protect, in case he senses a pass.

Only upon very long yardage and fourth down do we ever expect our defensive ends to attempt blocking a punt. When the opponents punt between the 30-yard stripes, we concentrate on the run back, and often call upon our defensive ends to block the offensive wing-men.

The Tackles

We try to teach our defensive tackles four methods of breaking through the offense. We give much drill in situations where a tackle must face an end, with a wing-back outside, directly behind the end or to the end's inside. Drill is also necessary to instruct the weak-side defensive tackle correct maneuvers when our line is overshifted. Although our tackles may take any number of pre-charging positions, the favorite point from which we like to have them work, when confronted by a wing-back outside the ends, is on the end's inside shoulder; the favorite point becomes the end's inside shoulder if the wing-back is inside the end. If the wing-back is directly behind the end, the favorite point is directly in front of the end. See Illustrations 3, 4 and 5.

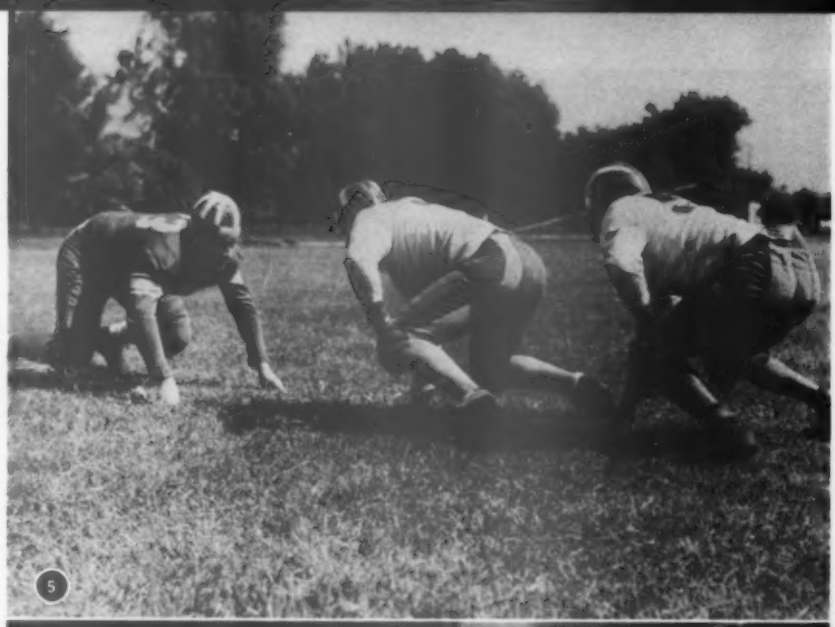
The methods for breaking through which we try to teach our tackles are as follows: (1) From a low four-point stance (unless he is the weak-side tackle, then take the three-point so he is up higher to get a better view of reverses, etc.), charge low through the seam; (2) Charge on the end with the inside knee covered by the inside arm and shoulder. Fight off the wing-back with the arms and hands. Lift the original charging leg quickly and limp-leg, twisting into the opponent's backfield. (3) This is just the reverse method of that described in No. 2. The initial knee charge with shoulder and arm dropped over the knee is made against the wing-back. The tackle then uses his hands and arms to fight off the end. He then releases his original charging knee and limp-legs on through. (4) The last defensive device taught our tackles is the over-the-top dive.

We have never had much success by having our tackles cross with our ends.

Guards

Our guards are never spaced in a seam as this makes the odds too great against them in maneuvering against the two offensive linemen, attempting to work on them. It is all important to a coach how he spaces his men and how well they are taught to get *advantageous* spots from which to work against nearly all types of offenses. Five inches out of position may allow a mediocre offensive man to handle a good defensive man. The more good blocking angles the offense can obtain, the greater the offense's chances for success. It is readily seen that any successful defensive strategy will aim at presenting as few good blocking angles as possible to the offense. No matter what defense is used, we never allow more than two yards between our defensive guards.

The first defensive weapon we teach our tackles and guards is that of bringing either knee forward quickly from the four-point stance. This knee must be covered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7

with the near shoulder and arm dropped over it. See Illustration 6. The second defensive point we stress is the correct use of the arms and hands on the opposite offensive lineman he first charges with the knee. See Illustration 7. The third step is the quick release of the knee and twist on through the seam. See Illustration 8. I am a firm believer in the four-point stance for high school guards. This helps to keep them low. We strive to have the charge impelled by short choppy steps. A constant motto I hold before our linemen is as follows: "The team that controls the first yard will be the winner." I think it wise to do all the practice charging with the snap of the ball, since this is a game condition. I constantly ask our defensive linemen never to relax in their stance when the opponents apparently become confused on a check-signal play. With the type of defensive thrust by our guards which I have described, they may charge on the offensive men in front of them, or the far opponents who seek to handle them. The old stand-by, submarine charge, is certainly one of the most effective weapons at the disposal of any guard. This means is of particular value when short yardage is attempted by the opponents. In coaching this defensive maneuver, one needs to pay particular attention that the guard is not left with his nose in the turf, but that he co-ordinates a push-up with his arms and short choppy impelling steps with his feet. The last weapon at the disposal of our guards, is the over-the-top dive. I am safe in saying that our guards use this technique at least once in every six charges. To me the four-point stance seems to be a favored position for the dive over, as well as for the submarine drive.

We spend much time in teaching our guards and tackles to drop to all fours and turn to the inside when no resistance is given by the offense. The chances are great that the fireworks are coming the way of any lineman let in or mouse-trapped. The better the defensive lineman we have, the more time we spend in facing this situation. Many high school coaches reserve their mousetrap plays only for the tough linemen they cannot handle in any other manner. We always make use of at least one guard in pass defense by pulling him out of the line to protect that dangerous area immediately behind the defensive line. Usually our selection for this duty is the right-defensive guard. He must take his initial charge, "smell" the pass, and quickly back out in readiness to knock down or intercept those basketball passes used so extensively by most high school coaches.

Another maneuver that has paid rich dividends is the angle charge of our defensive linemen to the right or left. Whichever angle our defensive line leader directs, is attempted by our line as a unit. If all defensive linemen charge to the right, the backfield takes special precaution to give its first attention to their left. We have found this slightly radical bit of defensive line play very disconcerting to offensive line assignments. See Illustration 9.

Against the pass offense, we are convinced that at least 60 per cent of any pass defense's success against a good passer is determined by how hard the line rushes the passer. It is our strategy, when against a good passer, to rush him hard; when against a poor passer, to concentrate on the interception.

We spend much time in teaching our linemen not to wrestle in the line, but to become agile with their feet and not fight unnecessary resistance. Any defensive lineman who is agile is a very difficult man upon whom to use the pinning or check-block.

On reverses we ask our boys who have broken through not to chase the apparent ball-carrier, but to wait and protect their areas for the "mail-carrier" coming back.

Against the punt, we play to block the kick when such an offensive maneuver is imminent and a team is backed deep in its own defensive territory with long yardage to make. We spend considerable time on fakes, drives and footwork of our left tackles. We also spend much time in co-ordinating the actions of our defensive right tackles, of the center who is backing up the weak side and of our right guard in blocking punts. Against a right-footed kicker a great burden is placed on the weak-side offensive back who is protecting for his kicker. See Illustration 10.

Our strategy, in case the boys are faced with a spread formation, is to meet strength with strength. During practice sessions all types of peculiar spread set-ups are presented, to give our boys practice in quickly detecting strength and then in concentrating the bulk of our defense.

An individual method which we stress, is to have our linemen "set up," then quickly move to a second position. They should make sure they detect whether or not the offensive men in position to work on them, pay special attention to their movements. If they do, our linemen may rest assured the power is coming their way. Instruction regarding detection of tell-tale signs of the backs is also valuable. The defensive lineman who catches these little messages found in stance, mannerisms and positions of both offensive backs and linemen, is taking a decidedly short cut to stardom as a defensive lineman. Some may call such linemen opportunists, but usually they are smart.

A love for contact, aggression and a determination to play viciously but cleanly, instilled with the coaching points already listed, would give me my ideal high school six-man line.

Many points already listed are carried over in grooming the seven-man line, five-man line and even a four-man line, but definite concessions must be adopted which in themselves would constitute a lengthy discussion. The line coach must have accurate knowledge of all these coaching points in using these defensive line arrangements. We use them and meet them. I have selected only the six-man line because it is most popular in central Illinois.

A BIG JOB AHEAD FOR ALL OF US

Today, the Department of Education is working out a program for the physical fitness of the youth in our schools and colleges.

Today, the Army and Navy hardening programs are being studied by every coach in the country. He is working not only for Saturday's game, but for the big game at Tokio.

Today, we are bending every effort in our laboratories to devise new equipment with the materials at hand and making substitutes that you can use in your hardening programs.

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We have on hand plenty of football shoes, especially in Style P.

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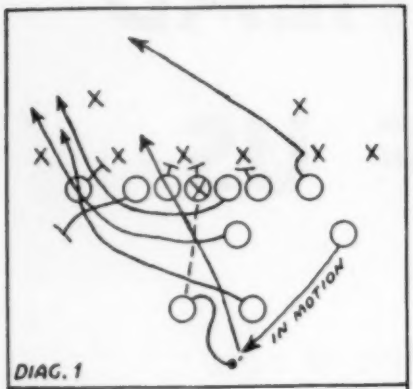
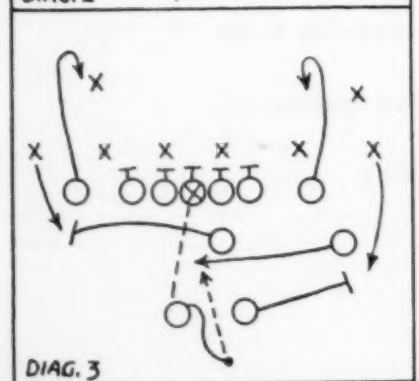
A Few Outstanding Plays in the 1942 All-Star Game



DIAG. 1

DIAG. 2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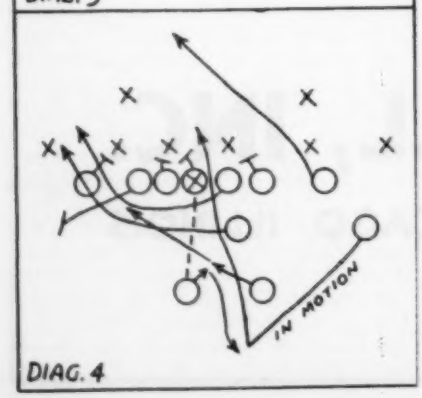


DIAG. 4

THE offense used by the All Stars was a balanced line and an unbalanced backfield. A man in motion was used in the execution of most of the plays, this man usually being the wing-back, as shown in Diagram 1.

The quarterback faced the weak side and was in position to receive the ball from center for indirect hitting quick-opening plays. The left halfback lined up five yards behind the left guard, facing the fullback, who lined up four and a half yards behind the right guard and faced straight ahead.

Several plays were run with the left half receiving the ball from center and feeding the ball forward to the fullback or the wing-back who was in motion.

In the fullback slant off tackle to the weak side, Diagram 1, the halfback hands the ball forward to the fullback.

The right halfback plunges inside the defensive left tackle, Diagram 2. The left half receives the ball from center, fakes to the fullback and hands it to the wing-back.

In the screen pass, shown in Diagram 3, which gained twenty-one yards, the All-Star line let the defensive Bear line through, held and then went down the field after the pass was completed.

In Diagram 4, the left halfback receives the ball from center and hands it to the fullback who hits off tackle.

In the quick-opening play of Diagram 5, the quarterback receives the ball from center and feeds it to the left halfback.

Diagram 6 shows a pass in which the left halfback receives the ball from center, fakes first to the fullback, then to the wing-back, drops back and forward-passes to the left end.

In the running pass shown in Diagram 7, the ball is passed to the fullback who spins and gives it to the left halfback who runs to the right and passes.

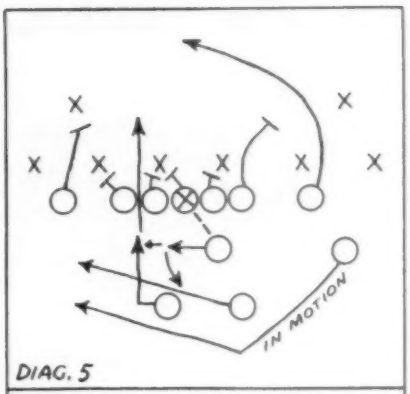
In the running pass, Diagram 8, the left halfback receives the ball direct from center and runs to the right.

Diagram 9 shows a reverse in which the left half receives the ball from center, fakes to the fullback and gives the ball to the wing-back.

Diagrams 10, 11 and 12 show the five-man, six-man and the over-shifted six-man line defenses as employed by the All-Stars.

The Chicago Bears who have been the National Football League champions for the past two years used their highly publicized "T" formation with all its variations. They would have a halfback in motion, sometimes lining up with one of their ends very wide. They also used splits

(Continued on page 42)



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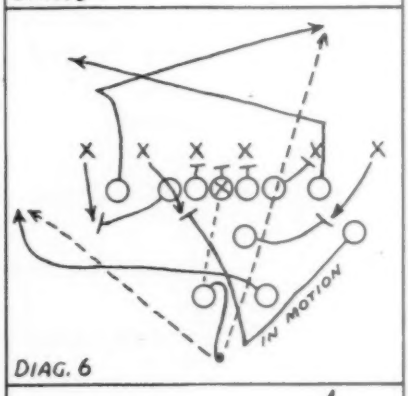

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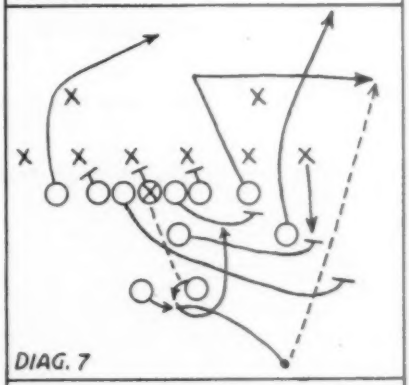
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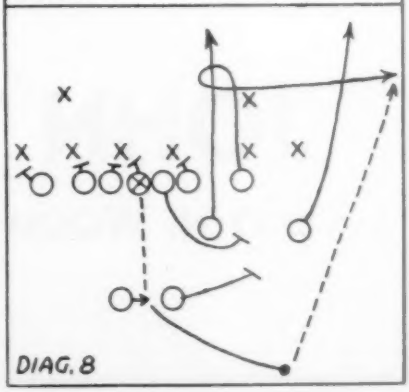
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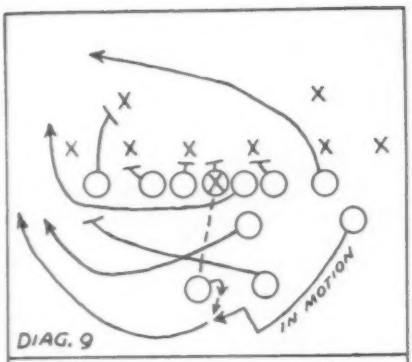

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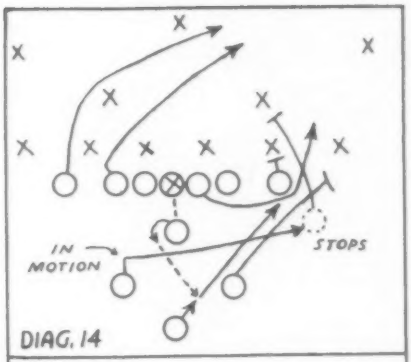

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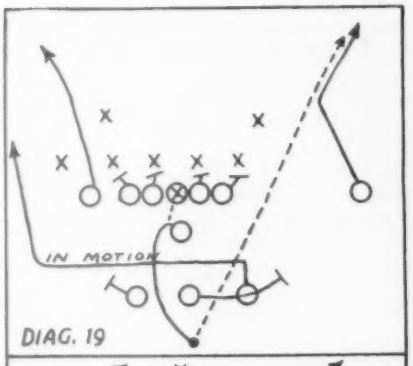

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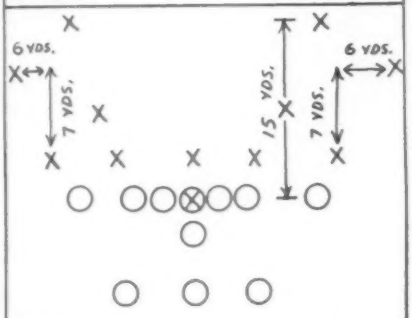

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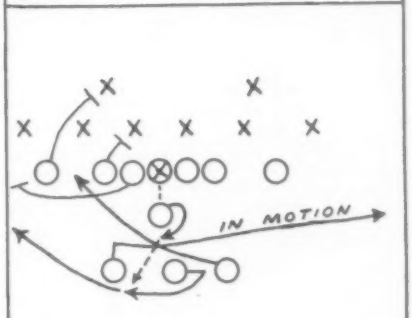

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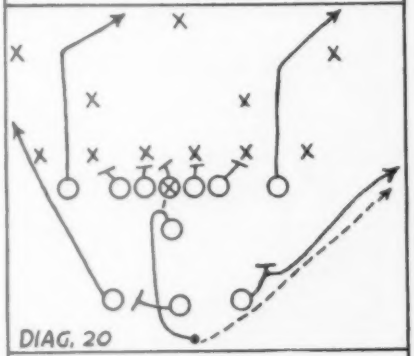
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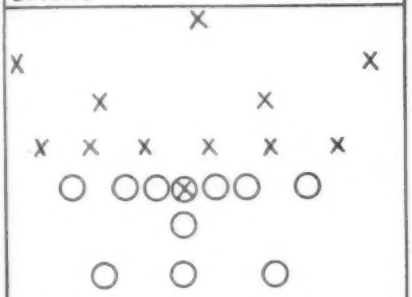
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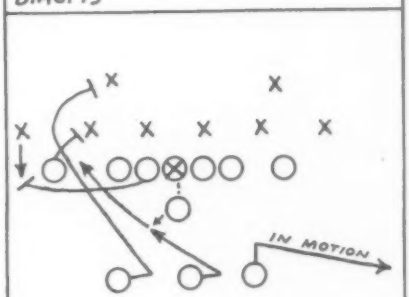

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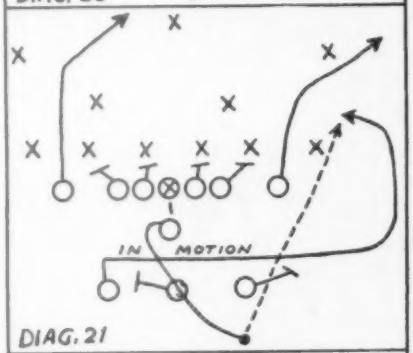

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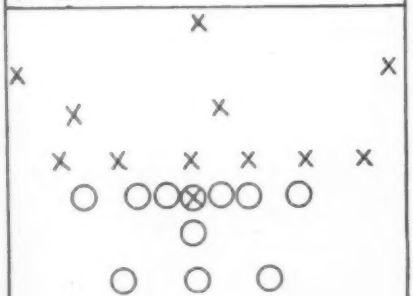
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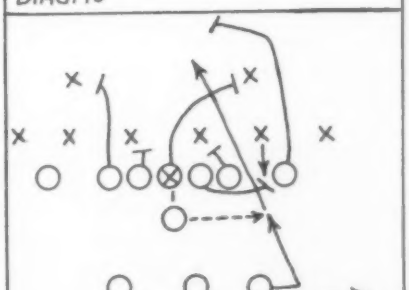
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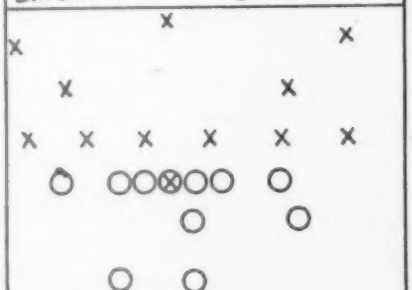
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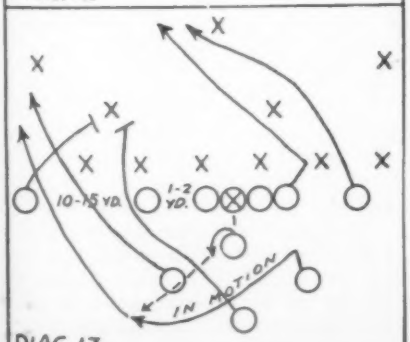

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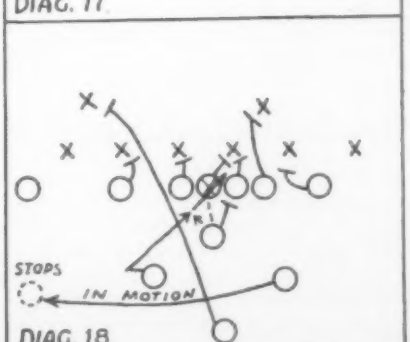

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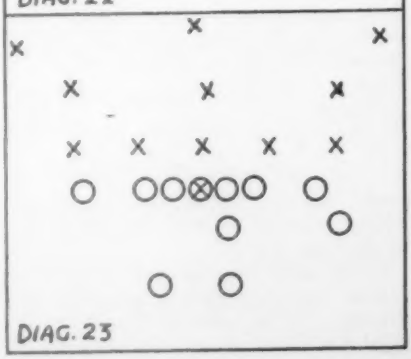
DIAG. 23

The Three-Fold Purpose of Athletics and Physical Education at Great Lakes Training Station

(Continued from page 7)

val stations. We learned that at Pearl Harbor. Sailors must pass 150-yard examinations in three styles, breast stroke, back stroke and side stroke. If they cannot swim, they receive lessons from capable instructors until they can accomplish the feat. A manual recently prepared by Roger Larson, one of the instructors at Great Lakes for the magazine, "Our Navy," gives tips to recruits on swimming through burning oil and other hazards.

A glance at the following exercises from a physical hardening manual we believe will prove of great benefit to college and high school programs. This Navy program is in use for all recruits in camps and at service schools, where sailors learn about gunnery, welding and other important positions aboard our warships. The toughening-up exercises at these schools are directed by Lieutenant (j.g.) A. H. Hecht, former coach at Washington High School, Milwaukee, Wisconsin.

Here are some of the exercises which are hardening the muscles of America's fighters:

Five Victory Exercises

1. Alternate raising of legs backward with whipping of arms sideward, backward, (palms up) right, then left. *Ready—Begin.* 1-16.
2. (A) Raise arms forward upward.
   (B) Bend knees deeply with arms sideward. (palms down)
   (C) Return to (A).
   (D) Arms forward downward *Ready—Begin.* 1-16.
3. (A) Bend trunk forward downward (bobbing FOUR times) touching fingers or hands to ground. 1-4.
   (B) Straighten trunk—place hands in front of chest (palms down) and whip elbows to rear and return FOUR TIMES. 5-8.
   (C) Repeat (A). 9-12.
   (D) Repeat (B). 13-16. *Ready—Begin.* 1-16.
4. (A) After completing exercises (3) circle arms across in front of chest four times. 1-4. Proceed into the (B) part of exercise with—arms—sideward—rigid.
   (B) With arms sideward CIRCLE hands backward four times. 5-8.
   (C) Repeat (A). 9-12.
   (D) Repeat (B). 13-16. *Ready—Begin.* 1-16.

NOTE: On completing (D) of exercise (4), bend elbows and bring hands in front of chest (palms down) on 15th count.

(NOTE: Hands are in front of chest, palm down.)

5. (A) Lunge right forward with whipping of arms sideward (palms down).
   (B) Return to standing position with hands in front of chest.
   (C) Repeat (A) with left foot.
   (D) Repeat (B). *Ready—Begin.* 1-16.

These five exercises are done to music and recorded for regimental use.

Warm-Up Exercises

(A) Running in place with knees high in front.
Arm for running—*Bend.*
On Place—*Run.* 1-2-3-4-5, etc.
One—Two—Three—*And Stop.*
Arms—*Down.*

(B) Running in place with *bending of knees* and *arms raised forward* on the *fifth count.*
On Place—*Run.* 1-2-3-4—Dip—etc.
One—Two—Three—and *Stop.*

(C) Running in place, dropping to prone positions and return to commands.
On Place—*Run.* 1-2-3-4—Dip—etc.
Prone position—Drop.
Ready—Up. (Recruits resume running.)
One—Two—Three and *Halt.*
(1-2-3 and *Stop.*)
(Allow 5 additional counts to come to position after command *Halt.*)

Apparatus and Track Events

(A) High Jump.
1. Running high jump, Western or Belly Roll. Demonstrate at low height.
2. Standing high jump. One step, spring off both feet.

(B) Wall Scale, 7 foot.
1. Run toward wall, placing right or left foot in middle and spring to front arm support or stomach-lying position. Place left hand in rear, right arm against back side and pivot or swing legs (right) over to ground.
2. Walk or run to wall, grasp edge and pull up to stomach position from which you pivot body over as above.

Horizontal Bars

1. Underswing to stand.
2. Jump to a front support. Underswing to a stand.
3. Knee up-start, return front leg to rear, underswing to a stand.
4. Learn to swing.
5. Skin the cat and return.
6. Nest hang.
7. Front standing position. Kick up and over to front support.
8. Swing and turns.
9. Front knee circle.
10. Back knee circle.
11. Rear pull-up to seat.
12. Penny drop.
13. Back hip circle.
14. Front hip circle.

There are many other exercises and stunts, including combative lessons for hand-to-hand fighting, and a game labeled by sailors as "Slap-A-Jap." In this event groups of ten or fifteen stand in circles, faced for marching with hands in rear. The one that is "It" runs outside the circle with a padded object which he places into someone's hands. The receiver begins to hit the player in front of him on the hips. The player being hit runs around outside the circle one or two times. After the runner returns to his position in the circle, the hitter moves about the circle and places the object in another player's hands. The game affords fun to the sailors and they enjoy the hardening exercises as they prepare to fight enemies seeking to destroy our freedoms. That's the American way.

Individual Basketball Play

(Continued from page 22)

rectly, and only those players who are willing to make the sacrifices are found on the best teams.

In the third and last case, there is a general rule to follow in guarding the dribbler. If the dribbler is moving toward the basket, the guard should run so that he is between the dribbler and the basket. Guarding the dribbler is a rather easy task if learned correctly. The inexperienced player, though, will slap at the ball before he is up even with the opponent, thus, breaking his stride and, in many cases, committing a foul unnecessarily.

In Illustration 3, the defensive player has lowered his body in an effort to contest the dribble. The hand on the same side as the ball has been lowered while the other hand is in almost the original position to block a quick pass in that di-

rection. The guard has his weight well-distributed on the balls of his feet; the feet are comfortably spread, the back is rigid and straight; the knees are bent considerably, and the hips are lowered accordingly. The eyes of the defensive player are fixed primarily on the ball.

A guard should be able to run as fast without the ball as any opponent who is dribbling the ball and running at the same time. Under normal conditions, the slowest defensive guard can be coached in the necessary fundamentals that will enable him to check the fastest dribblers relatively well.

After the guard has come between the dribbler and the basket, he should use the inside hand to bat the ball. There are two optional moves the guard can make in this situation. He can either strike at the ball, or swing up to strike the ball underneath. The latter method is recommended, since there will be less danger of committing a foul by hacking the arm of the dribbler. If the dribbler approaches very slowly and does not vary his speed to any great extent, the problem of the defensive guard is an easy one. But in the case of the dribbler coming at great speed, or using a change of pace and increasing his speed, he will many times force the guard off balance. If the dribbler stops, the guard should stop with him and move in with short steps to be in a position to block any additional maneuver. If the dribbler does not break the routine of his dribble and continues toward the basket, the guard should then try to crowd him toward the sideline, and if possible, force him out of bounds, but by all means, he should keep him away from the basket.

The evolution of the many variations of defensive basketball is as interesting as the modern rise of offensive basketball. As each idea in offense has become successful, a defensive adjustment has been necessary to stop what the offensive has been successful in doing.

Among many coaches in recent years, a common conception has been that a "good offense is a good defense." These coaches have spent the greater portion of the practice sessions stressing the fundamentals of offense.

Under the rules, a team loses possession of the ball when it scores, either from the floor or from the free-throw line. It is recommended here that greater emphasis be placed upon the development of the team's play on the defense, which would necessarily mean, too, detailed emphasis on the part each member is to play on the team as a unit. It is becoming more and more a fact that to be successful, a team must be clever at individual and team defensive skills.

Basketball games always will be won by the team scoring the greater number of points. A team, however, must give up possession of the ball every time it scores, and it requires a great amount of defensive skill to prevent the opponents from keeping possession of the ball and scoring, once they have the ball. It is an accepted fact that a goal saved is as good as one earned. A great amount of time should be spent in teaching individual defensive skills in an effort to maintain a near-balance between the offensive and defensive phases of the game.

An Obstacle Pentathlon

(Continued from page 13)

Nervous things happened at the "monkey swing." In the haste to make time several boys lost their grips as they swung violently along, but though they often landed flat on their backs not one suffered anything worse than a severe jarring up. My bad moment occurred when a big, still somewhat awkward freshman whom I have been grooming for a basketball center lost his grip and balance at the top of the wall and plunged headlong to the ground. He came around from behind the wall a moment later, just rubbing the back of his neck. He had taken the fall on his head, arms and shoulders. In the picture he may be seen at the top of the wall, second from the right. In the picture note that Meisel, the chap without a shirt, is in form and speed ahead of the others. He is a well-developed youth and finely types American manhood. On the other hand, Appleton, the boy with the striped pants, while structurally of the same build as Meisel, is completely undeveloped, a characteristic example of our recent physical education. We have given some thought to putting sawdust pits, as in pole vaulting, at the base of this wall and beneath the monkey swing, and to padding the top plank that holds back the earth at the entering ramp.

I have been asked some questions about modification of this course for high schools. I would say this course should be just about right for juniors and seniors in high school. For junior high school, I would suggest that the wall be made six feet, the monkey swing eight feet, the vaults four feet, and the hurdle two feet, six. The sawdust pits might be put in. I would further suggest to shorten the course to sixty yards by making the first two runs five yards instead of ten and the last run ten instead of fifteen. Then the course might be built at the side of any playground where it will interfere least with the playing space. But whatever is done a record of standard distances should be kept so that norms can be set up and stimulating and evaluating measurement achieved.

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Even if the obstacle course as described here is not adopted elsewhere, this article should suggest what must be done in our gymnasiums and on our playgrounds to give boys the physique and the stamina to measure with the boys of other countries whose adults are now challenging for supremacy on the earth with a consequent menace to our freedoms and our way of living. For this lesson must be learned and learned early enough by all democracies—those peoples who like to discuss and determine — and sometimes over-discuss and under-determine — their destinies — that there are certain disciplines that must be exerted, if the democracies are not to perish as all historical democracies have perished. One of these is that, through strenuous and even hazardous exercise, its youth shall become strong and hardy and unafraid.

Army Physical Conditioning

(Continued from page 27)

raise both legs and trunk from the ground, sitting up vigorously on the buttocks, in sort of "V" formation.

10. *Legs Right and Left.* Lying on the back, arms stretched out to the side, palms on the ground, legs vertical, swing the legs vigorously sidewards right and left, until the legs practically touch the ground on either side. Do this very vigorously, and rather rapidly. The faster it is done, the more vigorous is the movement.

11. *Run Zig-Zag.* This can be done in two ways: *a.* Step very far to the right with the right foot, and then far to the left with the left foot, as though striding through a set of automobile tires, staggered, and about three or four feet apart, and also make speed forward. *b.* Step across the right foot with the left foot, and run three steps diagonally to the right. Then step over the left foot with the right and run three steps diagonally to the left, etc. This can be done for five or seven steps.

12. *The Exercise Known as the Burpee Test.* Place the hands on the ground in front of the feet, bending the knees somewhat. Then thrust the feet backwards to a front rest position on the ground. Return in reverse order. Do this slowly at first, and then gradually speed it up. Do it for about one to two minutes, according to the speed. If at full speed, one minute to a minute and a half is enough. If slower, go two or three minutes.

13. Same as the last, except that the legs are thrust alternately to the right and to the left diagonally.

In all of these exercises, do them until there is real respiratory distress. One does not develop strength and endurance until these things are done *vigorously and until there is a good deal of distress.*

Remember that these exercises can be combined after they are learned so that a number of good combinations are possible. For example, "flop," "front," "back," "sit up," and the like may be put in from the appropriate position on the ground or in any exercise.

(Concluded in October)

Touchdowns With and Without a System

(Continued from page 30)

are two hours in length, making a total of ninety-six hours in which to do all coaching and playing of games, one can plainly see that no time can be wasted on the practice field. Furthermore, we cannot afford to spend time on things that do not bring results in games, nor can we afford to spend too much time on some things and not enough on others. It is my contention that way too much time is spent on offensive drill and plays and none or very little on the above-mentioned non-scrimmage possibilities of scoring. We are inclined to leave these methods of scoring to chance. This can never be brought home strongly enough until a coach wins a game by having some player return a punt for a touchdown, intercept a pass and score on it, return a kick-off, and win by it, or have some lineman break through, block a punt, and score on it, thereby winning the game. These possibilities hit home to me a couple of years ago, when during our biggest game of the year, both offenses were deadlocked. Neither team could gain a thing from scrimmage plays. Suddenly, our opponents scored by returning a punt. During the second half, our team scored returning a kick-off, returning a punt, and by intercepting a pass. Four touchdowns were scored in that game and not one of them by scrimmage methods. These are ways of scoring that we leave to chance; we have no time for them in our practice periods, yet they pull games out of the fire for us. If they bring results by little or no practice, they would bring much better results if we emphasized these game conditions and gave them a regular part in our practice sessions. Definite blocking assignments, criss-crosses, lateral passes (long and short) should be worked out as near as possible to game conditions. Chance will disappear, and organization will come.

Athletics a Part of the Physical Training Program at the Naval Aviation Pre-Flight Schools

(Continued from page 10)

usually long periods of time swimming with clothes on, under water, and while exposed to the hazards of cold, oil and fire. Being thrown overboard by an explosion or crash requires mastery of swimming under all of these and other emergencies.

Objectives: 1. To give the cadets confidence in their ability to swim, tread water, or stay afloat for an indefinite period of time, under varying conditions, and also to keep a shipmate afloat until a rescue party comes. 2. To develop in the cadet endurance, stamina, co-ordination, and all-around physical development.

The fundamental movements in wrestling are the basic movements in actual combat between two men. American catch-as-catch-can wrestling, or wrestling as taught in our schools and colleges, is a combination of the outstanding points of three wrestling sciences: (1) Japanese Judo, which teaches many skillful takedowns and falls; (2) Greco-Roman, which presents the arm and shoulder science of locks and trips from a locked position; and (3) American rough and tumble wrestling, which features speed and movement in ground wrestling and especially the science of leg scissors that can be applied to body, head, legs, or arms. Our amateur wrestling rules do not permit torture, or bonebreaking holds, or locks. However, most all of the holds taught in amateur wrestling can be extended and driven through until an opponent is crippled, or actually killed in the contest.

Objectives: 1. To teach the cadet the science of holds. 2. To teach the cadet how to execute the holds. 3. To teach the cadet that scientific execution is more effective than brute force. 4. To develop the cadet physically and provide excellent conditioning. 5. To develop toughness, aggressiveness and self-confidence.

Touch Football Adapted to the Classroom

(Continued from page 22)

assuming the offense.

The same procedure is used when an interception occurs. The team that lost the ball leaves the floor, and a second team from either the odds or evens as the case may be enters the game on the defense.

This system works perfectly, when the number of teams is even. However, when the class is divided into an odd number of teams, then the odd versus even effect is lost and the teams merely rotate with the team failing to score leaving the floor, and the next consecutively numbered team entering the game on the defense.

With this system of turnover, touch football can readily be incorporated into the repertoire of classroom games. In addition to its value as a conditioning device, it serves to teach the pupils many of the skills which will later be required of them, when they become candidates for the varsity team.

To sum it up briefly touch football, with the above adaptations, answers the need of the physical education teacher employing the games curricula in a seasonal program. It provides for the gymnasium an additional game which has all the requisites of a body developer. At the same time the game affords the teacher an opportunity to teach to a large number of pupils the fundamental skills of football, and provides for the teaching of poise, mental alertness, wholesome attitude, and sportsmanship.

Physical Fitness for Victory in Texas

Submitted from the Physical Fitness Program in Texas

By R. J. KIDD
Athletic Director, University Interscholastic League

THE work of local Supervisors of Physical Fitness is to stimulate and guide, in the local area, all possible measures aimed at encouraging children, youth, and adults to engage in activities that will promote their physical fitness. We view physical fitness in a broad sense, and believe that it involves health and the prevention of disease, correction of remedial health defects, good nutrition, muscular strength, organic strength, endurance and hardihood, good basic motor skills, and mental health and morale. Our part of Health and Emergency Medical Service program is especially concerned with the development of muscular strength, endurance, vigor, efficient motor skills, and morale.

Physical fitness is attained through: good nutrition; vigorous physical exertion; sleep and rest; and a belief in the worthwhileness of effort.

School and College Division

1. Endeavor to have every student receive a medical and dental examination during each school year. Use the suggested report slip in the Instruction Manual on Victory Physical Fitness Clubs in obtaining the signature of the family physician reporting that the examination has been given, and indicating advice as to physical education activities.

2. Study the individual health needs of each pupil as related to physical fitness. Discuss these needs with the pupil.

3. Base the physical education program on the needs of the pupils. Provide a system of individual pupil records.

4. Expand physical and health education programs to require a daily period for every pupil. No pupil who can attend school should be exempt from some form of health and physical education participation.

5. Survey the physical and health education program in the school system on the basis of the standards for accreditment of the State Department of Education.

6. Get school systems accredited with the State Department of Education.

7. If the system is accredited, check it to see that it really deserves accreditment.

8. Survey schools and their programs from the standpoint of safety and safety education—remove safety hazards.

9. Get school authorities to open school buildings for community recreation purposes.

10. Co-ordinate physical education programs with out-of-school recreation facilities and programs.

11. Start a program of daily health inspection by each teacher. Let the teachers work together in preparing a plan for daily health inspection. Co-ordinate health inspection with school and community health services.

12. See that pupils are informed about and visit community health services.

13. Get all teachers to take advantage of all opportunities to give health instruction.

14. Give instruction in first aid to all students, leading to the junior or advanced Red Cross First Aid Certificates.

15. See that schools are provided with ample, readily accessible first aid supplies.

16. Have a more vigorous physical education program of activities. Stress the following:

a. Study the special needs of each student.

b. Give some body-building conditioning exercises to students who are especially weak. Do not make the whole program consist of calisthenics.

c. Have some apparatus work, such as climbing, hanging, vaulting, and jumping.

d. Include chinning and dipping exercises.

e. Stress track and field activities.

f. Continue to stress team sports.

g. If trained instructors are available, teach some boxing and wrestling to high school boys.

h. Insist on correct performances and vigorous participation for boys and girls.

i. Allow no one to be excused from some form of physical and health education, and especially do not accept band, pep-squad, monitor duty, etc., in place of physical education.

j. Devote some part of each period to stress on health matters, but do not substitute "health lectures" for the daily physical education periods. Additional periods for health education are needed in high schools.

17. Encourage the formation of Physical Fitness Clubs. Get every pupil in a club. Get teachers to act as club sponsors.

18. Stress forms of mass competition in which all take part. Reduce any overemphasis on single school teams.

19. Make wider use of student leaders.

20. Interschool contests can be held in the form of "telephone" meets in which each team stays at home and telephones the records made to another school to

FUNDAMENTALS of BASKETBALL

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decide which school wins.

21. In interschool contests play teams close at home. Avoid long trips. Have a school represented by several teams in a sport rather than by one team only.

Equipment and Instructional Supplies

Just as both equipment and instructional supplies are needed for science laboratories and shops, they are equally essential to the conduct of physical fitness programs. For teachers and pupils in this program to do without fundamental apparatus as well as bats, balls, books, and the like, means that their programs will be restricted and that the results will be jeopardized. Lack of adequate, fundamental equipment and supplies reduces the efficiency of the teacher and limits the development of the pupils.

Trustees and boards of education should make the necessary provision in their annual budgets for these essentials. Schools, which do not have adequate equipment such as bars, ladders, vaulting horse, and basketball goal boards and goals, should make immediate budgetary provisions for these items. In addition, it is recommended that at least 50 cents per pupil be budgeted each year for the purchase of instructional supplies including sports supplies and books and reference materials.

In this war emergency, it is expected that every school and college—regardless of lacks in gymnasium space—will make an all-out effort for the development of physical fitness. Even though gymnasium space cannot be secured for the present, the program should proceed out of doors; and outdoor equipment and supplies should be provided to make the program effective.

Physical Fitness in the Schools and Colleges

(Continued from page 5)

the main headings of (1) sports and games, (2) gymnastics, (3) combatives, and (4) aquatics. The main differences between this program and the usual high school program of physical education are (1) the use of more intensive and vigorous activities, and (2) the increase in the time allotment for physical education.

Installation of the Program

The present plan for initiating this program includes (1) mailing a copy of the printed manual to every high school principal and superintendent of schools, (2) a series of regional institutes for the purpose of introducing the program to representatives of State departments of education and teacher training colleges, and other leaders from the States located in each region, (3) a series of training institutes within each State for the purpose of presenting the program to the school principals and teachers of physical education, and (4) field service by staff members of the Division of Physical Fitness of the U. S. Office of Education directed mainly toward stimulating the development of programs of teacher training in service.

Administrative Adjustments

The installation and operation of the expanded program of physical education will necessitate some adjustments in school curricula and administrative procedures. These may involve an increase in the length of the school day, revision of the curriculum, increase in the teaching load of the faculty, and changes in the transportation schedule in schools when some of the pupils are brought to school in busses.

In general it seems wise to emphasize the fact that people must realize clearly that this country is engaged in a life-or-death struggle for the existence of the American way of life and that the time has passed when temporizing and compromising in connection with the war effort can be tolerated. We cannot have "business as usual" in education. The schools, as well as the boys at the front, must make an all-out effort to win the war.

The development of strength and endurance on the part of all high school and college youth is one of the definite and vitally important things that the schools can do and are expected to do.

A Few Outstanding Plays in the 1942 All-Star Game

(Continued from page 36)

in their line to try to spread the defense which would help their one-on-one blocking.

In the lateral pass, Diagram 13, from the quarterback to the right half in motion, the left half was the personal interferer.

Diagram 14 shows a fullback slant off tackle.

Diagram 15 is a counterplay with the fullback to the weak side. Diagram 16 shows a fullback slant to the weak side.

Diagram 19 shows a pass which netted a touchdown.

Diagram 20 shows a delayed pass to the right halfback after he blocked.

Diagram 21 shows a hook pass to the man in motion.

Diagrams 22 and 23 show the six-man and five-man defense employed against the All Stars.

TRAINERS JOURNAL

SECTION

The NATIONAL ATHLETIC TRAINERS ASSOCIATION

SEPTEMBER, 1942 No. 1

Official Publication
Of the National Athletic
Trainers Association

Building a Training Room
Kenneth L'Hommedieu

What Price Correctives?
W. S. Lilly

A National Health
Service Club
Harold T. Friermood

Roland Bevan, athletic trainer at West Point illustrating his talk on Athletic Injuries at the Dayton, Ohio, Health Service Clinic

THE TRAINERS JOURNAL SECTION

Official Publication National Athletic Trainers Association

September, 1942 No. 1

Officers National Athletic Trainers Association
For 1942-1943

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Office of Publication, Iowa City, Iowa

We Are at It Again!

LAST year was our first attempt at a National Athletic Trainers Association Magazine. If you have assembled our trainers' sections from the ten issues and bound them together you should be proud of the Association's first volume. Every member who contributed to its pages should share in the success of this first publication.

We have many letters from high school coaches, expressing their appreciation of the Trainers' Section. This alone should make us feel repaid, for if we can pass on to others information of value, we as trainers are doing a job worth while.

This year demands more than ever before of trainers and the Trainers Association. Many of our members have been called into the various services and several are serving as trainers in the Navy Pre-Flight Training Schools. We hope to announce in a future issue the present location of the men of our active membership last year.

The loss of many trainers to their institutions makes imperative the training of more men by those of ability to train trainers. This is one of our first duties. Keep talking up our Trainers Association among the college conferences as we started to do last year. That is our second duty. The larger and stronger our membership the better our Trainers Journal. Emphasize and clarify the High School Student Trainers Plan in your localities. The coaches who adopted this plan last year not only helped the boys who took the course, but also they themselves profited by the assistance their student trainers were able to give.

Last and most important of all, America needs conditioned boys and men as never before. When we taped the ankles each night last fall before practice we were taping so that our players would be prevented from injury; we were perhaps thinking of that big game on Saturday and we wanted every boy in shape. Much more is now at stake and it is up to us to work harder and keep every boy in perfect shape for the great battle, not of next Saturday but of next year.

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Building a Training Room

By Kenneth L. L'Hommedieu
Formerly Athletic Trainer, St. Lawrence University

THE process of building a training room from scratch, for the smaller high schools and many of the larger ones as well, looks like a problem that can never be solved. For the benefit of those who think this problem is of such immensity that it cannot even be considered, the following suggestions are made.

The St. Lawrence University training room as a general college training room is small, the dimension being 30'x12'. However, it is not necessarily the quantity but the quality that counts. For that reason and to show many of the men who believe that to have a little space is to have none at all, I present to you a small, but well equipped training room and the method that we used in getting it.

Illustrations 1 and 2 show the shelves and cabinets where supplies both for immediate use and storage can be placed. These shelves and cabinets were built by the university's carpenter and painted by N.Y.A. students. Notice the three cabinets in Illustration 1 with the long, wide top, making the space used not only useful as cabinet space but also for a general dressing table. The cabinets as shown in Illustration 1 have locks on them so the more important medications that are likely to be picked up and carried out may be safely guarded. The shelves along the wall as shown in Illustrations 1 and 2 make for space saving and efficiency.

Illustration 2 shows the massage tables. At St. Lawrence wooden tables are used due to the use of shortwave machines. The massage tables shown in Illustrations 2 and 4 were also put together by the university's carpenter. One is slanted and the other is straight. These massage tables have four legs, flat top, and a few braces.

A sink with hot and cold running water is important not only for efficiency in injury treatment but also for sanitation. The application of cold, hot, or hot and cold alternate applications becomes simple and easily done when the sink is close at hand.

Illustration 1.

WHILE serving as wrestling coach and athletic trainer at St. Lawrence University last year, Mr. L'Hommedieu wrote for the Trainers Journal on The Responsibility of the Coach in the Care of Athletic Injuries. The article, Building a Training Room, appearing in this issue, was prepared for us, before he entered the service. He has just renewed his membership in the Association and ordered the Trainers Journal for another year.—Editor's Note.

The washing of hands and bloody surfaces is also facilitated. Illustration 3.

Illustration 3. A surgical cabinet, on which salves may be put and on the inside of which can be placed all instruments, special medications so the doctor can find them without too much trouble should they be needed.

Utility jars, waste cans, stools, basin, leg rest, etc. Small things that add much to the appearance, cleanliness, and efficiency of the training room.

Illustration 2.

Illustration 3.

A record of every individual who comes in the training room should be kept. This is done for the protection of the school, the boy, the trainer or coach, and the doctor. A copy as used at St. Lawrence is shown.

DAILY RECORD SHEET

Name Sport Injury Treatment Date

ST. LAWRENCE UNIVERSITY, Canton, N. Y.

HEALTH CERTIFICATE

This is to certify that.....
has come before me for physical examination.
Physical Fitness .....
Remarks:

.....19.. (Signed).....
M.D.

THE ST. LAWRENCE UNIVERSITY
DEPARTMENT OF PHYSICAL EDUCATION

Injuries and Treatment

Class.....
Name..... Address.....
Sport Injury Treatment Date

The training room should be kept clean.

The minimum equipment for a modern training room:

1—One or more massage tables.
2—A surgical cabinet.
3—Deep therapy lamp.
4—Two or more therapeutic lamps.
5—Two or more electric heating pads.
6—Foot tubs.
7—Stretcher.
8—One gymnasium scale.
9—Utility jars.
10—Waste cans.

The following equipment is to be bought as the financial situation of the school allows: In the order named,

1—Whirlpool bath.
2—Shortwave diathermy.

Illustration 4.

3—First aid kits.
4—Ultra-violet lamp.
5—Files.
6—Sweat cabinet.

The following are medications that the training room should carry plus any special medications that the school doctor might advocate:

1—Alcohol.
2—Iodine
3—Boric acid solution.
4—Potassium permanganate.
5—Benzoin compound.
6—Zinc stearate.
7—Aromatic spirits of ammonia.
8—Aromatic ammonia capsules.
9—Zinc oxide ointment.
10—Balsam of Peru.
11—Erophene.
12—Aspirin.
13—Corn plasters.
14—Collodion.
15—Salt tablets.
16—Whitfield's ointment.
17—Adhesive tape, 1″ and 1½″.
18—Band-aids.
19—Bandages, 1″ and 2″.
20—Sterile gauze pads, 3″x3″.
21—Chiropodist's felt.
22—Ankle roller bandages.
23—Bandage rolling machine.
24—Sponge or foam rubber.
25—Resin.
26—Weight charts.
27—Tongue depressors.
28—Cotton wound applicators
29—Surgical scissors.
30—Razor and blades.
31—Crutches.

What Price Correctives?

By W. S. Lilly

Director of Athletics, Baltimore Polytechnic Institute

AMERICA did not become conscious of the sad state of health our country was in until the last World's War of 1917. When America entered the conflict we were stunned to hear of the vast percentage of men turned down in the draft for flat feet, poor eyesight, faulty teeth, malnutrition, heart ailments and venereal diseases.

Since that time educators have realized that there are too many physically handicapped people from curable diseases. Today there is a vast amount of illness resulting from defects which are correctible. The corrective movement started in the middle west and far west and soon wide-awake physical educators were making the corrective gymnasium a required part of their physical plant. It must be borne in mind that every form of corrective work must be supervised by a physician. In 1923 Polytechnic started a corrective program on a most simple line, namely, "Posture." The slogan adopted was, "Know a Poly boy by his walk." From that meagre program gradually developed a complete system of corrective work. Today corrective work is a definite part of our Physical Education Program.

What price correctives is the main point of discussion in this article. Corrective programs can be instituted in schools without affecting the efficiency of the general physical education department, and without the expenditure of a great deal of money. The director of the school must realize that the sole basis of success of corrective work depends upon the patient's application to his prescribed exercise. Corrective work may be done without any pretentious plant. In fact, marked improvement has been made by the boys at summer camps where no actual corrective apparatus is available.

Starting with the opening of school, the school physician should be sent all the boys who, in the estimation of the physical director, need corrective work. Upon complete physical examination by the doctor these boys are divided into classifications: 1. Those taking required gymnasium work in the main gymnasium. 2. Those assigned to the corrective gymnasium with definite prescribed exercises. 3. Those temporarily excused from gymnasium and assigned to the school library until their condition allows them to resume corrective work. 4. Those permanently excused from the gymnasium and corrective gymnasium and assigned to the library. These students must write papers on assigned subjects pertaining to health and physical education.

After the correcitve group is assigned then the individual instruction begins. It is wise to have each instructor in your department assigned to corrective work. This not only increases the efficiency of the men but also rotates the teaching load. Corrective work requires constant instruction and inspiration. Much of our success has been due to the faithful efforts of our men who impress upon the students the value of constant corrective exercise as a means of rehabilitating their bodies. Many text books are available pertaining to corrective exercises and proper procedure. Outstanding in this field are the books by Dr. George T. Stafford: Sports for the Handicapped and Preventive and Corrective Physical Education.

It is interesting to note the various types of corrective cases we have had at the Polytechnic Institute. We do not claim to perform miracles but we have the satisfaction of knowing that many boys have strengthened their bodies, corrected their defects and received definite inspiration from the services given by our corrective teachers. Corrective exercises must be constantly practiced in order that the individual receive any benefits.

Typical List of Corrective Cases at Polytechnic for One Year In Corrective Room

Ankylosed Hip	1
Bilateral Hernia	1
Brachial Paralysis	1
Broken Fingers	3
Broken Leg	3
Broken Neck	1
Broken Wrist	5
Cardiac Regime	8
Congenital Defects	3
Enlarged Thyroid	1
Flat Feet	9
Hemophiliac	1
Thoriac Deformity	1
Underweight	10
Varicocele (left)	1
Knee Injury	3
Kyphosis	1
Malnutrition	2
Paralysis Left Leg	3
Paralysis Right Arm	2
Obesity	23
Poliomyelitis	1
Post Operative Appendectomy	4
Post Operative Hernia	4
Posture	10
Removal of Right Eye	1
Scoliosis	5
Shoulder Injury	5
Sprained Elbow	3
Sprained Knee	2

Assigned to Library for Limited Period

Broken Arms	3
Bronchitis	1
Infected Foot	2
Sinus	1
Broken Leg	1
Dry Skin	1
Nephritis	1

Library Cases—Permanent

Loss of Leg	1
Poliomyelitis	2
Asthma	1
Congenital Defects	3

About 28 per cent of the total enrollment of corrective students are transferred to the gymnasium by the school physician after a period of six months' exercises. About 15 per cent of the 28 per cent are students who have recovered from operations and have obtained the necessary physical strength to do full time gymnasium work.

A National Health Service Clinic

By Harold T. Friermood

Director of Physical Education, Y.M.C.A., Dayton, Ohio

MEN traveled 4,535 miles from nine states and eleven cities to attend the first national Health Service Clinic conducted in Dayton, Ohio. The purpose of the clinic was to bring experienced masseurs into a week's intensive program, to brush up on anatomy and physiology, massage technique, the care of Y.M.C.A., college, and high school athletic injuries, remedial exercise, rehabilitation of service men, coaching of individual sports, and business management.

Men came from Denver, Colorado, St. Paul, Minnesota, Columbus, Georgia, Grand Rapids, Michigan, Louisville, Kentucky, Ft. Wayne, Indiana, Canton, Ohio, Cincinnati, Ohio, The University of Illinois, West Point, and Dayton, Ohio. These men had been in health service, massage, and training work for periods ranging from two to twenty-five years.

The faculty included such head-liners as Roland Bevan, athletic trainer at West Point; Dr. George T. Stafford, Department of Physical Education, University of Illinois; Dr. H. Worley Kendall, in charge of the Department of Physical Medicine at Miami Valley Hospital, and Vice President of the American Congress of Physiotherapy; Dr. Walter A. Reiling, a special lecturer at the University of Dayton; Dr. Everett Shank, Chairman of the Dayton Y.M.C.A. Health Education Committee; Harold C. Pedicord, Manager Dayton Y.M.C.A. Health Service Section, and Thomas I. Smallwood, Assistant Manager, Dayton Y.M.C.A.

In addition to lectures, practical demonstrations, actual operation and performance of massage work, bandaging, taping, and activities in the gymnasium, courts, and swimming pool, visits were made to the Veterans Facility (Soldiers Home Hospital) where physiotherapy in all its forms and vocational rehabilitation was explained by Clarence Walsh, Chief Physiotherapist, and demonstrated by his assistants; to the Welfare Department of the National Cash Register Company where the complete medical and physiotherapy work for employees and executive officers as conducted under the supervision of Dr. F. G. Barr, was explained; to the Miami Valley Hospital where lectures and demonstrations were given, motion pictures shown, and actual operation of the complete department of Physical Medicine, under the direction of Dr. H. Worley Kendall, was provided including the operation of the fever therapy machines.

In these days of decreasing personnel in Physical Departments, trainers, masseurs and Health Service operators may have to take over many additional tasks formerly carried by the coaches and Physical Educators. Intensive work in this field was provided. It was pointed out that many Y.M.C.A.s are equipped to give school and college teams valuable service in this program.

Rehabilitation work is gaining in importance and men must be trained to take care of the large numbers of people who will need this kind of service following the war. Dr. George G. Deaver, New York University, in the *Journal of Physical Education* July-August 1942, p. 119, said,

"There will be millions of men fighting in the far corners of the earth; some will never return, and it is estimated that from fifty to seventy-five thousand of each million will be so seriously handicapped they will need physical and vocational rehabilitation. The government and private agencies are giving a great deal of thought to this problem, and the Y.M.C.A.'s schools and colleges must prepare to do their part in this post-war problem."

Many practical and interesting motion picture films were shown. These were secured from the American Medical Association, Becton-Dickinson Co., Rutherford, N. J., and the University of Illinois Physical Fitness films.

QUALIFICATIONS FOR MEMBERSHIP IN THE NATIONAL ATHLETIC TRAINERS ASSOCIATION

SENIOR MEMBERSHIP: 1. Men who have been actively engaged in athletic training or closely allied work for a period of two or more years. 2. Men who are qualified to take charge of the work, in co-operation with the medical department and to direct it in athletic training in a college or university. 3. Men who have had four years of practical experience in a recognized athletic training department of a college or university or some other institution of recognized standard.

Senior members have voting privileges.

JUNIOR MEMBERSHIP: 1. Men who do not qualify as Senior members but who are actively engaged in athletic training either as an assistant in a college or university. 2. Men in charge of the training program in a high school, or in closely allied work. 3. Men who are taking an approved training course.

Any Junior member may become a Senior member upon completing the requirements for Senior membership and passing an admission test given by the Membership Committee. Junior members do not have voting privileges.

Senior and **Junior** applicants **must submit** along with the application blank a letter of **endorsement** from the **physician** who acts as medical supervisor in their institutions.

ASSOCIATE MEMBERSHIP: 1. Men who have not been actively engaged in athletic training for a period of eighteen months previous to their application. 2. Junior or Senior members who have not been actively engaged for a period of eighteen months, but who are interestd in the advancement and recognition of athletic training. 3. High school coaches and student high school trainers.

Associate members do not have voting privileges.

Senior and Junior membership dues are one dollar per year. Dues for Associate members fifty cents. Applications for membership should be addressed to Bill Frey, Secretary and Treasurer, Iowa City, Iowa.

Announcements

THE Coaches Ready Reference Buying Guide which has been run in this publication for the last year will be temporarily discontinued. According to the coach readers it has aided them materially in being able to pass on their requests to the advertisers with a minimum amount of time expended. On the other hand, long lists of requests have necessitated an additional effort in the offices of some advertisers. We are, therefore, asking our readers to send their requests direct to the advertisers.

Army and Navy Insignia

In the June issue, the Witchell Sheill Company carried an especially attractive insert showing the insignia of the Army and Navy. We have had inquiries as to the availability of these inserts at this time. There are still some copies on hand. They may be secured by writing the Witchell Sheill Company, 1635 Augusta Blvd., Chicago.

Taping Films

Taping Technique a, 16 mm film—both sound and silent—is available for bookings. Trainers and coaches should address their requests to The Bike Web Company, 41 West 25th St., Chicago.

Handbook on Athlete Injuries

Just announced in this issue is a new handbook on Athletic Injuries with a foreword written by Dr. Wilbur Bohm, president elect of the National Athletic Trainers Association. Other members of the Association are contributing authors. It is suggested that our many readers who preserve their copies of the ATHLETIC JOURNAL for binding, communicate at once by card or letter and ask for a copy of Athletic Injuries. Write direct to Antiphlogistine, The Denver Chemical Mfg. Co., 163 Varick Street, New York City.

Help in Your Coaching Problems

Since so many teachers in the high schools are having to take over coaching duties for the duration of the war to carry on while the active coach is in the service attention is called to the service department of the ATHLETIC JOURNAL. Your coaching problems are answered by experts. There is no charge for the service. Send your questions and problems to Service Department, ATHLETIC JOURNAL, 6858 Glenwood Ave., Chicago.

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